



MICROCOPY RESOLUTION TEST CHART NATIONAL BUREAU OF STANDARDS-1963-4

4

- ----



PERCEPTIONS OF QUALITY OF NURSING CARE: PATIENTS AND REGISTERED NURSES IN A HOSPITAL USING 12-HOUR SHIFTS

11

by

Linda A. Van Vechten

A Thesis Submitted to the Faculty of the Graduate School at The University of North Carolina at Greensboro in Partial Fulfillment of the Requirements for the Degree Master of Science in Nursing



| ECURITY CLASSIFICATION OF THIS PAGE (When Date Entered) | READ INSTRUCTIONS |
|--|--|
| | ON NO. 3 RECIPIENT'S CATALOG NUMBER |
| AFIT/CI/NR 83-64T A1354 | 51 |
| . TITLE (and Subtitle) | 5 TYPE OF REPORT & PERIOD COVERED |
| Perceptions of Quality of Nursing Care: Patients and Registered Nurses in a Hospital | THESIS/DJSSEPJATION |
| Using 12-Hour Shifts | 6 PERFORMING ORG. REPORT NUMBER |
| AUTHOR(s) | 8. CONTRACT OR GRANT NUMBER(3) |
| Linda A. Van Vechten | - |
| PERFORMING ORGANIZATION NAME AND ADDRESS | 10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS |
| AFIT STUDENT AT: The University of North Caroli Greensboro | ina |
| 1. CONTROLLING OFFICE NAME AND ADDRESS | 12. REPORT DATE |
| AFIT/NR WPAFB OH 45433 | 1983 13. NUMBER OF PAGES |
| | IS RUMBER OF FRUES |
| A. MONITORING AGENCY NAME & ADDRESS(II different from Controlling C | Office) 15. SECURITY CLASS. (of this report) |
| | UNCLASS |
| | 15. DECLASSIFICATION DOWNGRADING SCHEDULE |
| 6 DISTRIBUTION STATEMENT (a) this Report | |
| 6. DISTRIBUTION STATEMENT (of this Report) APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIN - 7. DISTRIBUTION STATEMENT (of the ebstrect entered in Block 20, 11 diffe | |
| APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIN | |
| APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIN 7. DISTRIBUTION STATEMENT (of the obstract entered in Block 20, 11 difference of the statement and the statement of the stateme | LONN E. WOLAVER Dean for Research and |
| APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIN 7. DISTRIBUTION STATEMENT (of the observed in Block 20, if diffe 18. SUPPLEMENTARY NOTES APPROVED FOR PUBLIC RELEASE: IAW AFR 190-17 21 Mar | Woland LONN E. WOLAVER Dean for Research and Professional Development |
| APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIN 7. DISTRIBUTION STATEMENT (of the obstract entered in Block 20, 11 difference of the statement and the statement of the stateme | Went from Report) |
| APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIN 7. DISTRIBUTION STATEMENT (of the observed in Block 20, if diffe 18. SUPPLEMENTARY NOTES APPROVED FOR PUBLIC RELEASE: IAW AFR 190-17 21 Mar | Working Report) With E. WOLAVER Dean for Research and Professional Development number) Accession For NTIS GRAPH |
| APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIN 7. DISTRIBUTION STATEMENT (of the observed in Block 20, if diffe 18. SUPPLEMENTARY NOTES APPROVED FOR PUBLIC RELEASE: IAW AFR 190-17 21 Mar | Vient from Report) When the second s |
| APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIN 7. DISTRIBUTION STATEMENT (of the observed in Block 20, if diffe 8. SUPPLEMENTARY NOTES APPROVED FOR PUBLIC RELEASE: IAW AFR 190-17 21 Ma | Vient from Report) |
| APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIN 7. DISTRIBUTION STATEMENT (of the observed in Block 20, if diffe 18. SUPPLEMENTARY NOTES APPROVED FOR PUBLIC RELEASE: IAW AFR 190-17 21 Mar | IVENT E. WOLAVER Dean for Research and Professional Development number) Accession For NTIS GRA&I DTIC TAB Unannounced Justification |
| APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIN 7. DISTRIBUTION STATEMENT (of the obstract entered in Block 20, 11 diffe 8. SUPPLEMENTARY NOTES APPROVED FOR PUBLIC RELEASE: IAW AFR 190-17 21 Mar 9. KEY WORDS (Continue on reverse side if necessary and identify by block is 0. ABSTRACT (Continue on reverse side if necessary and identify by block is 0. ABSTRACT (Continue on reverse side if necessary and identify by block is 1. ABSTRACT (Continue on reverse side if necessary and identify by block is 1. ABSTRACT (Continue on reverse side if necessary and identify by block is 1. ABSTRACT (Continue on reverse side if necessary and identify by block is 1. ABSTRACT (Continue on reverse side if necessary and identify by block is 1. ABSTRACT (Continue on reverse side if necessary and identify by block is 1. ABSTRACT (Continue on reverse side if necessary and identify by block is 1. ABSTRACT (Continue on reverse side if necessary and identify by block is 1. ABSTRACT (Continue on reverse side if necessary and identify by block is 1. ABSTRACT (Continue on reverse side if necessary and identify by block is 1. ABSTRACT (Continue on reverse side if necessary and identify by block is 1. ABSTRACT (Continue on reverse side if necessary and identify by block is 1. ABSTRACT (Continue on reverse side if necessary and identify by block is 1. ABSTRACT (Continue on reverse side if necessary and identify by block is 1. ABSTRACT (Continue on reverse side if necessary and identify by block is 1. ABSTRACT (Continue on reverse side if necessary and identify by block is 1. ABSTRACT (Continue on reverse side if necessary and identify by block is 1. ABSTRACT (Continue on reverse side if necessary and identify by block is 1. ABSTRACT (Continue on reverse side if necessary and identify by block is 1. ABSTRACT (Continue on reverse side if necessary and identify by block is 1. ABSTRACT (Continue on reverse side if necessary and identify by block is 1. ABSTRACT (Continue on reverse side if necessary and identify by block i | Accession For NTIS GRA&I Unannounced Justification By |
| APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIN 7. DISTRIBUTION STATEMENT (of the obstract entered in Block 20, 11 difference 18. SUPPLEMENTARY NOTES APPROVED FOR PUBLIC RELEASE: IAW AFR 190-17 21 Mar 9. KEY WORDS (Continue on reverse side if necessary and identify by block 0. ABSTRACT (Continue on reverse side if necessary and identify by block | Accession For NTIS GRA&I Unannounced Justification By Distribution/ |
| APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIN 7. DISTRIBUTION STATEMENT (of the obstract entered in Block 20, 11 difference 18. SUPPLEMENTARY NOTES APPROVED FOR PUBLIC RELEASE: IAW AFR 190-17 21 Mar 9. KEY WORDS (Continue on reverse side if necessary and identify by block is 0. ABSTRACT (Continue on reverse side if necessary and identify by block is 19. Stract (Continue on reverse side if necessary and identify by block is 10. ABSTRACT (Continue on reverse side if necessary and identify by block is 10. ABSTRACT (Continue on reverse side if necessary and identify by block is 10. ABSTRACT (Continue on reverse side if necessary and identify by block is 10. ABSTRACT (Continue on reverse side if necessary and identify by block is 10. ABSTRACT (Continue on reverse side if necessary and identify by block is 10. ABSTRACT (Continue on reverse side if necessary and identify by block is 10. ABSTRACT (Continue on reverse side if necessary and identify by block is 10. ABSTRACT (Continue on reverse side if necessary and identify by block is 10. ABSTRACT (Continue on reverse side if necessary and identify by block is 10. ABSTRACT (Continue on reverse side if necessary and identify by block is 10. ABSTRACT (Continue on reverse side if necessary and identify by block is 10. ABSTRACT (Continue on reverse side if necessary and identify by block is 10. ABSTRACT (Continue on reverse side if necessary and identify by block is 10. ABSTRACT (Continue on reverse side if necessary and identify by block is 10. ABSTRACT (Continue on reverse side if necessary and identify by block is 10. ABSTRACT (Continue on reverse side if necessary and identify by block is 10. ABSTRACT (Continue on reverse side if necessary and identify by block is 10. ABSTRACT (Continue on reverse side if necessary and identify by block is 10. ABSTRACT (Continue on reverse side if necessary and identify by block is 10. ABSTRACT (Continue on reverse side if necessary and identify by block is 10. ABSTRACT (Continue on reverse side if necessa | Accession For NTIS GRA&I Unannounced Justification By Distribution/ Availability Codes |
| APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIN 7. DISTRIBUTION STATEMENT (of the obstract entered in Block 20, 11 diffe 8. SUPPLEMENTARY NOTES APPROVED FOR PUBLIC RELEASE: IAW AFR 190-17 21 Mar 9. KEY WORDS (Continue on reverse side if necessary and identify by block is 0. ABSTRACT (Continue on reverse side if necessary and identify by block is 0. ABSTRACT (Continue on reverse side if necessary and identify by block is 1. ABSTRACT (Continue on reverse side if necessary and identify by block is 1. ABSTRACT (Continue on reverse side if necessary and identify by block is 1. ABSTRACT (Continue on reverse side if necessary and identify by block is 1. ABSTRACT (Continue on reverse side if necessary and identify by block is 1. ABSTRACT (Continue on reverse side if necessary and identify by block is 1. ABSTRACT (Continue on reverse side if necessary and identify by block is 1. ABSTRACT (Continue on reverse side if necessary and identify by block is 1. ABSTRACT (Continue on reverse side if necessary and identify by block is 1. ABSTRACT (Continue on reverse side if necessary and identify by block is 1. ABSTRACT (Continue on reverse side if necessary and identify by block is 1. ABSTRACT (Continue on reverse side if necessary and identify by block is 1. ABSTRACT (Continue on reverse side if necessary and identify by block is 1. ABSTRACT (Continue on reverse side if necessary and identify by block is 1. ABSTRACT (Continue on reverse side if necessary and identify by block is 1. ABSTRACT (Continue on reverse side if necessary and identify by block is 1. ABSTRACT (Continue on reverse side if necessary and identify by block is 1. ABSTRACT (Continue on reverse side if necessary and identify by block is 1. ABSTRACT (Continue on reverse side if necessary and identify by block is 1. ABSTRACT (Continue on reverse side if necessary and identify by block is 1. ABSTRACT (Continue on reverse side if necessary and identify by block is 1. ABSTRACT (Continue on reverse side if necessary and identify by block i | Accession For NTIS GRA&I Distribution/ Availability Codes Availability Codes |
| APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIN 7. DISTRIBUTION STATEMENT (of the obstract entered in Block 20, 11 diffe 8. SUPPLEMENTARY NOTES APPROVED FOR PUBLIC RELEASE: IAW AFR 190-17 21 Mar 9. KEY WORDS (Continue on reverse side if necessary and identify by block is 0. ABSTRACT (Continue on reverse side if necessary and identify by block is 0. ABSTRACT (Continue on reverse side if necessary and identify by block is 1. ABSTRACT (Continue on reverse side if necessary and identify by block is 1. ABSTRACT (Continue on reverse side if necessary and identify by block is 1. ABSTRACT (Continue on reverse side if necessary and identify by block is 1. ABSTRACT (Continue on reverse side if necessary and identify by block is 1. ABSTRACT (Continue on reverse side if necessary and identify by block is 1. ABSTRACT (Continue on reverse side if necessary and identify by block is 1. ABSTRACT (Continue on reverse side if necessary and identify by block is 1. ABSTRACT (Continue on reverse side if necessary and identify by block is 1. ABSTRACT (Continue on reverse side if necessary and identify by block is 1. ABSTRACT (Continue on reverse side if necessary and identify by block is 1. ABSTRACT (Continue on reverse side if necessary and identify by block is 1. ABSTRACT (Continue on reverse side if necessary and identify by block is 1. ABSTRACT (Continue on reverse side if necessary and identify by block is 1. ABSTRACT (Continue on reverse side if necessary and identify by block is 1. ABSTRACT (Continue on reverse side if necessary and identify by block is 1. ABSTRACT (Continue on reverse side if necessary and identify by block is 1. ABSTRACT (Continue on reverse side if necessary and identify by block is 1. ABSTRACT (Continue on reverse side if necessary and identify by block is 1. ABSTRACT (Continue on reverse side if necessary and identify by block is 1. ABSTRACT (Continue on reverse side if necessary and identify by block is 1. ABSTRACT (Continue on reverse side if necessary and identify by block i | number) By Distribution/ Availability Codes |
| APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIN 7. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if difference 8. SUPPLEMENTARY NOTES APPROVED FOR PUBLIC RELEASE: IAW AFR 190-17 St Mon 9. KEY WORDS (Continue on reverse alde if necessary and identify by block 0. ABSTRACT (Continue on reverse alde if necessary and identify by block of ATTACHED | Accession For NTIS GRAAI Unannounced Justification By Distribution/ Availability Codes Arii and/or Dist Special Ari |
| APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIN 7. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if difference 8. SUPPLEMENTARY NOTES APPROVED FOR PUBLIC RELEASE: IAW AFR 190-17 3. KEY WORDS (Continue on reverse side if necessary and identify by block 0. ABSTRACT (Continue on reverse side if necessary and identify by block ATTACHED 1. JAN 73 1473 ED. TION OF 1 NOV 55 IS OBSOLETE | Accession For NTIS GRA&I Distribution/ Availability Codes Availability Codes |
| APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIN 7. DISTRIBUTION STATEMENT (of the ebstrect entered in Block 20, if difference 10. SUPPLEMENTARY NOTES APPROVED FOR PUBLIC RELEASE: IAW AFR 190-17 11. AW AFR 190-17 1. KEY WORDS (Continue on reverse side if necessary and identify by block 0. ABSTRACT (Continue on reverse side if necessary and identify by block ATTACHED 1. JAN 73 1473 ED. TION OF 1 NOV 55 IS OBSOLETE SECURE | Accession For NTIS GRAAI Unannounced Justification By Distribution/ Availability Codes Arili and/or Dist Special |

_

VAN VECHTEN, LINDA ANN. Perceptions of Quality of Nursing Care: Patients and Registered Nurses in a Hospital Using 12-Hour Shifts. (1983) Directed by: Dr. Ruby G. Barnes. Pp. 87.

The purpose of the study was to investigate the quality of nursing care as perceived by patients and as perceived by registered nurses who worked a compressed workweek. There were 33 patients and 35 registered nurses in the sample. The study was conducted in a 100-bed, private, investor-owned hospital in the southeast United States within an urban setting.

Data were collected using a modified version of Risser's Patient Satisfaction Scale and two researcher-devised questions. A mean rating and a t test for independent samples were used for analysis of data. Significance was set at the 0.05 level.

Three hypotheses were established: H_1 : Patients will perceive the care received from registered nurses who work a compressed workweek as quality nursing care. H_2 : Registered nurses who work a compressed workweek will perceive care administered to patients as quality nursing care. H_3 : There will be no difference between the perception of regiscered nurses and the perception of patients as to the quality of nursing care. All three hypotheses were supported.

APPROVAL PAGE

This thesis has been approved by the following committee of the Faculty of the Graduate School at the University of North Carolina at Greensboro.

Thesis Adviser Ruby G. Barner

Committee Members

| mbers | Clain Q. Lunie | |
|-------|----------------|--|
| | William ARomen | |

March 28 1983 Date of Acceptance by Committee

L 28 1983 nal Oral Examination Date of

ii

ACKNOWLEDGMENTS

The encouragement, guidance, and support of many people were essential for the completion of this endeavor. Special appreciation is expressed to Dr. Ruby G. Barnes, whose unlimited patience, constructive guidance, and continuous support as Chairperson of my Thesis committee was invaluable. For their continued interest and assistance as committee members, gratitude is also expressed to Dr. Eloise R. Lewis and Dr. William A. Powers III.

Gratitude is expressed to the Associate Executive Director/Nursing at the agency wherein the data were collected for supporting this research, and to the patients and registered nurses who participated in the research.

Acknowledgment also is extended to Ms. Judy Lipinski of the Statistical Consulting Service for her assistance with statistical analysis, and to Mrs. Tena Pipkin for the typing of this thesis.

Special recognition is given to my mother, Mrs. Lillian L. Van Vechten, for her assistance and encouragement in order for this thesis to be accomplished. Finally, recognition and appreciation is extended to the United States Air Force for fully sponsoring my school assignment and thesis project.

iii

TABLE OF CONTENTS

| | · · · | Page |
|----------|---|------|
| APPROVAI | 2 PAGE | ii |
| ACKNOWLE | EDGMENTS | iii |
| LIST OF | TABLES | vii |
| CHAPTER | | |
| Ι. | INTRODUCTION | 1 |
| | Justification of the Problem | 1 |
| | Statement of the Problem | 4 |
| | Purpose | 5 |
| | | 5 |
| | | 7 |
| | Hypotheses | 8 |
| | Identification of the Variables | 9 |
| | Definition of Terms | 9 |
| | | 11 |
| | Summary | 11 |
| 11. | CONCEPTUAL FRAMEWORK AND REVIEW OF LITERATURE | 13 |
| | Conceptual Framework | 13 |
| | Compressed workweek. | 13 |
| | | 13 |
| | Nursing | 17 |
| | | 18 |
| | Review of Literature. | 20 |
| | | 20 |
| | Compressed workweek, quality, | 20 |
| | and perception | 20 |
| | Compressed workweek | 22 |
| | Perception | 22 |
| | Compressed workweek and quality | 23 |
| | Quality | 24 |
| | Quality and satisfaction | 25 |
| | Summary | 26 |
| 111. | METHODOLOGY | 28 |
| | Research Design | 28 |
| | Approval for the Study. | 28 |
| | Settine | 28 |

CHAPTER

.

| | Sample | 30 |
|------------|--|----|
| | Available population | 30 |
| | Registered nurse sample | 30 |
| | Patient sample | 34 |
| | Questionnaires | 35 |
| | Basis | 35 |
| | Reliability. | 37 |
| | Validity | 38 |
| | Instrument development procedure | 39 |
| | Instrument Design | 40 |
| | | 41 |
| | Data Collection | 42 |
| | Method of Analysis. | 44 |
| | | 44 |
| IV. | ANALYSIS OF DATA | 46 |
| | Introduction | 46 |
| | | 47 |
| | Testing of H ₁ | 48 |
| | Testing of H_2^2 | 49 |
| | | |
| v. s | SUMMARY, DISCUSSION, IMPLICATIONS, AND | |
| | RECOMMENDATIONS | 51 |
| | | •- |
| | Summary | 51 |
| | Discussion of Findings with Implications for | •- |
| | Nursing | 52 |
| | Recommendations for Future Studies. | 54 |
| | | 34 |
| REFERENCE | NOTES | 56 |
| BIBLIOGRAP | HY | 57 |
| APPENDIX A | . HUMAN SUBJECTS REVIEW COMMITTEE APPROVAL LETTER | 63 |
| APPENDIX B | . AGENCY CONSENT FORM | 65 |
| APPENDIX C | . CONFIRMATION LETTER TO AGENCY | 68 |
| APPENDIX D | . LETTER REQUESTING CONSENT TO USE INSTRUMENT | 70 |
| APPENDIX E | . CONSENT TO USE RISSER'S PATIENT SATISFACTION SCALE . | 72 |
| APPENDIX F | . PATIENTS SATISFACTION QUESTIONNAIRE | 74 |

۷

Page

Page

CHAPTER

- - --

.

| APPENDIX G. | REGISTERED NURSES SATISFACTION QUESTIONNAIRE | 79 |
|-------------|--|----|
| APPENDIX H. | VERBAL INTRODUCTORY STATEMENT TO THE STAFF NURSE | 84 |
| APPENDIX I. | VERBAL INTRODUCTORY STATEMENT TO THE PATIENT | 86 |

. .

AFIT/CI/NR 83-64T

AFIT RESEARCH ASSESSMENT

The purpose of this questionnaire is to ascertain the value and/or contribution of research accomplished by students or faculty of the Air Force Institute of Technology (ATC). It would be greatly appreciated if you would complete the following questionnaire and return it to:

AFIT/NR Wright-Patterson AFB OH 45433

RESEARCH TITLE: Perceptions of Quality of Nursing Care: Patients and Registered Nurses

| | in a Hospital Using 12-Hour Shifts |
|----------|--|
| AUTHOR: | Linda A. Van Vechten |
| RESEARCH | ASSESSMENT QUESTIONS: |
| 1. | Did this research contribute to a current Air Force project? |

2. Do you believe this research topic is significant enough that it would have been researched (or contracted) by your organization or another agency if AFIT had not?

() a. YES

() a. YES

() b. NO

NO

() b.

3. The benefits of AFIT research can often be expressed by the equivalent value that your agency achieved/received by virtue of AFIT performing the research. Can you estimate what this research would have cost if it had been accomplished under contract or if it had been done in-house in terms of manpower and/or dollars?

() a. MAN-YEARS

() b. \$

4. Often it is not possible to attach equivalent dollar values to research, although the results of the research may, in fact, be important. Whether or not you were able to establish an equivalent value for this research (3. above), what is your estimate of its significance?

() a. HIGHLY () b. SIGNIFICANT () c. SLIGHTLY () d. OF NO SIGNIFICANT SIGNIFICANT SIGNIFICANCE

5. AFIT welcomes any further comments you may have on the above questions, or any additional details concerning the current application, future potential, or other value of this research. Please use the bottom part of this questionnaire for your statement(s).

NAME

GRADE

POSITION

ORGANIZATION

STATEMENT(s):

FOLD DOWN ON OUTSIDE - SEAL WITH TAPE

AFIT/NR WRIGHT-PATTERSON AFE ON 46433 OFFICIAL BUSINESS PENALTY FOR PRIVATE USE. \$300

.

۶

NO POSTAGE NECESSARY IF MAILED IN THE UNITED STATES

.

BUSINESS REPLY MAIL FIRST GLASS PERMIT NO. 73228 WAMMINGTON B. C.

POSTAGE WILL BE PAID BY ADDRESSEE

AFTT/ DAA Wright-Patterson AFB OH 45433

LIST OF TABLES

· •

.

.

7

STAT SALA

| TABLE | | Page |
|-------|--|------|
| 1 | Registered Nurse Sample by Employment | 31 |
| 2 | Registered Nurse Sample: Age, Ethnic Group, and Education | 32 |
| 3 | Registered Nurse Sample: Hours, Shift, and Work History | 33 |
| 4 | Registered Nurse Sample: Central Tendency by Months of six- and 12-hour Shifts | 34 |
| 5 | Patient Sample: Sex, Age, Ethnic Group, and Education | 36 |
| 6 | Patient Sample: Days in Hospital | 37 |
| 7 | Mean Rating of Patients' Perceptions of Satisfaction with and Quality of Nursing Care Received | 47 |
| 8 | Mean Rating of Nurses' Perceptions of Satisfaction with and Quality of Nursing Care Rendered | 48 |
| 9 | t-test Results: Quality of Nursing Care | 49 |

vii

CHAPTER I

1

INTRODUCTION

Justification of the Problem

"The delivery of health care in the United States is considered a big business and as a business is a target of consumerism" (Robinson, 1978, p. 14). "During the past decade, expenditures per patient day have risen at an annual rate exceeding 10 percent" (Sloan & Elnicki, 1980, p. 15). This increasing cost suggests that the health care delivery system, of which nursing is a part, is not utilizing many of the business world techniques to provide better service to a larger clientele at a lesser cost (Robinson, 1978).

One major cost to a hospital is the nursing staff. Traditionally, nurses have been scheduled to work one of three, eight-hour shifts for five days a week. This manner of staffing may not optimize available human resources or meet the individual needs of the patient, the nurse, or the hospital (Hatfield, 1981b). The standard or conventional eighthour day, five-day workweek that is usually associated with health care facilities is slowly being replaced by a variety of compressed workweeks.

Since the modification of the 40-hour workweek is a relatively new phenomenon in the nursing field, the background and relevance of a compressed workweek is best understood by an examination of its industrial roots. Hours of work have long been recognized as having a marked effect on the way an individual lives (Gunderson, 1980; Szilagyi & Wallace, 1980). Mann (1965) contends that the workweek was established with the biblical injunction that man should not work more than six days. Rowan (1965) concurred with Mann that the six-day workweek and the workday from sunup to sundown were basic societal patterns that were unchanged for most of our recorded history. The conventions about hours of work, as Mann purported, began to be altered with the coming of the industrial revolution.

Rowan (1965) contends that the decade of the 1830's ushered in a period in which American labor made a strong bid for a reduction in hours that were normally sunup to sundown, or approximately a 12-hour workday, to a 10-hour workday. Marshall (1965) and Rowan concur that by the close of the 1830's, the 10-hour day in a six-day workweek was becoming a way of fife. Both the 10- and 12-hour day prevailed until the post-Civil War period when there was a renewed interest in the reduction of hours. The date May 1, 1886, was set by the American Federation of Labor as general establishment of the eight-hour day (National Industrial Conference Board, 1929; Rowan, 1965).

Following the establishment of the eight-hour day, the next modification sought was a shortened workweek. The year 1908, according to The National Industrial Conference Board (1929) and Poor (1973), was the initiation of the five-day week of 40 hours. Miller (1978), Nollen and Martin (1978), and Ronen and Primps (1981) totally concur that the late 1960's ushered in the compressed workweek of 40 hours worked in fewer , than five days.

Various authors have described the conversion of their health care facilities to such compressed work schedules as: (a) three 12-hour shifts for a 36-hour workweek (Cales, 1976; DeMarsh & McLellan, 1972;

Ryan, 1975); (b) the 10-hour day in the 40-hour workweek (DeCosta, 1973; Larsen, 1973; Sellars, 1973; Shaw, 1978); and (c) working a variety of six- to 12-hour shifts (Cleland, Smith, & McHugh, 1973; Colt & Corley, 1974; The Demise of the Traditional 5-40 Workweek, 1981; Donovan, 1978; Hatfield, 1981a; Priçe, 1981; Weiss, Sauer, & Sobiech, 1981; Weiss, Sobiech, & Sauer, 1981). Such reports, however, have tended to be more news orientated as opposed to research orientated articles.

Currently, the 12-hour day or compressed workweek (CWW) is being introduced into an increasing number of hospitals (Ganong, Ganong, & Harrison, 1976; Vik & McKay, 1982); however, there is little empirical evidence about the affects of the 12-hour workday on the quality of nursing care. Naturally, a very important aspect of the health care system and one of increasing national concern is the quality of health care services (Gonnella, Louis, & McCord, 1976). This concern was also recognized by the American Nurses Association when it included high quality nursing care as an essential part of the 1973 American Nurses' Association's Standards of Nursing Practice. The Joint Commission of Accreditation of Hospitals (1982) reiterated the point with the principles that

the hospital shall demonstrate a consistent endeavor to deliver patient care that is optimal within available resources (p. 151)....There shall be an organized nursing department/service that takes all reasonable steps to provide the optimal achievable quality of nursing care. (p. 115)

The patient and the provider of the health care services may differ significantly in their perceptions of what quality care is and to what extent it is present (Donabedian, 1969; Houston & Pasanen, 1972). With

regard to this perception, the literature revealed studies concerning the patients' perception of the quality of their own care (Leke, 1978; Moore & Cook-Hubbard, 1975; Ventura, Fox, Corley, & Mercurio, 1982; Vik & McKay, 1982). Other applicable articles focused on the registered nurses' perception of the quality of nursing care that they administer (Eaton & Gottselig, 1980; Safford & Schlotfeldt, 1960). Still other studies record the researchers' evaluation of the quality of nursing care the patients receive (Hegyvary & Haussman, 1976a; Wandelt & Ager, 1974). Severely lacking are empirical studies similar to Atwood and Hinshaw's (1977), which centered on both patients' and nurses' perception of the quality of nursing care. In conclusion, previous research studies revealed the patients' perception of the quality of their nursing care, the nurses' perception of the quality of their nursing care, and the researchers' evaluation of the patients' quality of nursing care. Limited was previous research on analyzing concurrently how the patient and the nurse perceive the quality of nursing care.

Statement of the Problem

Since hospitals are using business world techniques, such as the compressed workweek, to provide services to patients at a lesser cost, the problem investigated in the study was to determine if there was quality of nursing care as perceived by registered nurses and by patients.

Purpose

ł

The study had one purpose. The researcher investigated the quality of nursing care as perceived by patients and as perceived by registered nurses who worked a compressed workweek.

Assumptions

Basic to the purpose and justification of the study are several assumptions. Throughout the study it was assumed that patient satisfaction was an indicator of the quality of his or her nursing care. This is supported by the fact that few instruments exist to directly measure quality (Abdellah & Levine, 1979; Chance, 1980; Polit & Hungler, 1978); therefore, indirect means such as evaluation of satisfaction must be used to determine quality (Abdellah & Levine, 1979; Chance, 1980; DeGeyndt, 1970; Donabedian, 1982; Stufflebeam, 1971).

It was also assumed throughout the study that more than one type of individual's perception of quality of nursing care should be viewed. In support, Krech and Crutchfield (1948) and Tosi and Carroll (1976) maintained that perception was functionally selective and no one perceived everything to be perceived. A number of authors (Donabedian, 1969; Houston & Pasanen, 1972; Krech & Crutchfield, 1948; Ruch, 1963; Tosi & Carroll, 1976) endorsed the previous statement and emphasized that two people may differ significantly in how they perceived a situation. Furthermore, leveling, also known as normalization, can affect a person during the interval between the perception of the event until committed to memory, and finally, to recall (Allport & Postman, 1947; Morgan & King, 1966). In leveling, irregularities are smoothed over until

stabilization but never to the point of obliteration (Allport & Postman, 1947; Morgan & King, 1966). When details are smoothed over or omitted, there can be errors in perception with future effects on perception, recall, and memory (Morgan & King, 1966). An individual's own senses, memory, and knowledge are necessary parts of perception (Krech & Crutchfield, 1948; Ruch, 1963); therefore, patients are the best ones to perceive if their needs such as privacy, quiet for sleep, and comfort are received and, in turn, classified as quality of nursing care (Donabedian, 1982; Kirchhoff, 1976).

It was further assumed that the Patient Satisfaction Questionnaire adapted by this author from the Risser Patient Satisfaction Scale (Risser, 1975) would give a measure of the patients' perception of the quality of nursing care. The results would indicate how the patients perceived the quality of their nursing care since satisfaction is considered by some authors (Abdellah & Levine, 1979; Chance, 1980; DeGeyndt, 1970; Donabedian, 1982; Stufflebeam, 1971) as an indicator of quality nursing care.

Another assumption of the study was that a measure of the registered nurses' perceptions of the quality of nursing care could be obtained with the use of the Registered Nurses Satisfaction Questionnaire which is this author's adaptation of Risser's (1975) Patient Satisfaction Scale. Since the nurse can best address his or her own views of the nursing care they administer, the Registered Nurses Satisfaction Questionnaire was considered an appropriate way to assess how the nurses perceived the quality nursing care delivered.

Limitations

For the purposes of the study, the following were limitations:

1. The study was limited to two medical-surgical units in a small private, investor-owned hospital located in the southeast United States within an urban setting. Therefore, the findings could not be generalized beyond the relatively small sample studied.

2. The patient had to be at least the legal age of 18 years but at or less than the full Social Security eligibility retirement age of 65 years (Boskin, 1981). The age criterion was selected because individuals under the age of 18 years were considered minors and permission for that individual to participate in the study would have to be obtained from a parent or a legal guardian (Bullough, 1980). Since additional permission could influence the patients' perception of their nursing care, an attempt was made to control for the intervening variable by not including minors in the sample. Additionally, Abdellah and Levine (1979) illustrated that patient care studies indicated that how a patient responded to the scale of satisfaction with nursing care was related to age--older people generally reacted favorably to their nursing care regardless of its real quality. Since the Social Security official age of retirement for older people was 65 years (Boskin, 1981), this age was selected as the cutoff point beyond which the patient would be considered older. Any influence by younger or older patients was thus attempted to be controlled.

3. Even though the Risser (1975) Patient Satisfaction Instrument had a high reliability and validity established with 600 medicalsurgical patients (Hinshaw & Atwood, 1982), no prior testing had been

conducted on nurses. The researcher considered the Registered Nurse Satisfaction Scale a limitation because it was directed toward the nurse rather than the patient population.

4. There were many uncontrolled personal antecedent variables which could affect a person's perception of nursing care. As these variables differ among individuals, so could their perceptions. Diagnosis, age, emotional status, culture, attitudes, past hospitalizations, past experiences, education level, relationship with hospital roommate, and attending physician (Katz & Kahn, 1978; Ruch, 1963) were the included variables.

5. Other antecedent variables may be considered bureaucratic in nature. These included administrative policy, nursing service philosophy, third party payers who may have determined when and what care was given, and government studies, reports, and grants (Sleeper, 1976).

6. The researcher recognized that participation in the study was voluntary; therefore, there was no basis to assume that the perceptions were representative of those who did not participate.

Hypotheses

Three hypotheses were established for the research:

1. Patients will perceive the care received from registered nurses who work a compressed workweek as quality nursing care.

2. Registered nurses who work a compressed workweek will perceive care administered to patients as quality nursing care.

3. There will be no difference between the perception of registered nurses and the perception of patients as to the quality of nursing care.

Identification of the Variables

The dependent variable in each of the three hypothesis was the perception of the quality of nursing care. The perceiver was the independent variable: H_1 -the nurses, H_2 -the patients, and H_3 -both the nurses and the patients.

Definition of Terms

For the purposes of the study, the following definitions were used:

1. <u>Compressed workweek</u>. A 12-hour workday in which a nurse alternates working four, 12-hour shifts one week and three, 12-hour shifts the next week. A trade is made between the number of hours worked per day and the number of days worked per week (Ronen & Primps, 1981). Also, two individuals may split one, 12-hour shift by each working six hours. Operationalized in the study, a registered nurse was considered as working a compressed workweek if he or she worked one, 12-hour shift each working day-or if he or she worked one, six-hour shift each working day and another registered nurse worked the other six-hour shift each working day, whereby coverage for 12 consecutive hours was provided.

2. Nursing care. According to King:

nursing is defined as a process of action, reaction, interaction, and transaction whereby nurses assist individuals of any age group to meet their basic human needs in coping with their health status at some particular point in their life cycle. (1968, p. 27)

Based on King's definition of nursing, nursing care was operationalized as a comprehensive view of all registered nurse and patient interactions within the private, investor-owned hospital.

3. <u>Patient</u>. Donabedian (1980) purported that a patient is a person who actually received nursing care in a hospital. Operationalized for the study, the patient was a person who actually received nursing care on a medical-surgical unit in the private, investor-owned hospital during the period of time under study.

4. <u>Patient satisfaction</u>. Risser (1975) defined patient satisfaction as the degree of congruency between a patient's expectations of ideal nursing care and his or her perception of the real nursing care. As expectations move closer together or further apart so will congruency; and, therefore, satisfaction either increases or decreases, respectively. For the study, patient satisfaction meant how contented the patient was with'the nursing care received during the period of time under study as determined by the Patient Satisfaction Questionnaire.

5. <u>Perception</u>. Perception was seen by some authors (Morgan & King, 1966; Ruch, 1963; Tosi & Carroll, 1976) as how information which surrounded individuals in their environment was assimilated and organized from information gained through the senses. Ruch emphasized that reactions to situations were determined by the way the individual perceived them. "The same objective situation is often perceived in two quite different ways by two different people or even by the same person at two different times" (1963, p. 295). Based on these findings, perception was operationalized as how the nurses and the patients at any given moment assimilated and reacted to incoming environmental stimuli. For the study, the nursing care was the environmental stimuli.

6. <u>Private, investor-owned hospital</u>. Operationally defined, this was an acute care facility that was owned by a business corporation and operated to make a profit while, at the same time, providing health services.

7. <u>Quality</u>. Operationalized for the study, quality was present when the person of concern was satisfied that criteria of minimum care had been met and was not excessive nor inappropriate as demonstrated by response to the questions found in the Patients Satisfaction Questionnaire and the Registered Nurses Satisfaction Questionnaire.

8. <u>Registered nurse</u>. Operationally defined, the nurse was: a graduate of a diploma, associate, or baccalaureate nursing program; registered with a state board of nursing; currently licensed to practice nursing in the state where the study was conducted; and providing either direct or indirect nursing care to patients within the private, investor-owned hospital on either a six- or 12-hour shift.

Summary

Replacement of the standard five-day workweek is being made with compressed workweeks for many reasons. One reason is better utilization of business world techniques in order to provide better service to a larger clientele at a lower cost. These conversions have been made without many supporting studies regarding the affect on the quality of nursing care. The researcher felt that more empirical evidence should be obtained from research studies regarding the affect of converting from standard shifts to 12-hour shifts on the quality of nursing care.

Consequently, the study dealt with the patients' perception and with the registered nurses' perception of the quality of nursing care.

CHAPTER II

CONCEPTUAL FRAMEWORK AND REVIEW OF LITERATURE

Chapter I reviewed the problem of determining if there was quality of nursing care as perceived by the registered nurses and as perceived by the patients. Three hypotheses were stated. The concepts of the compressed workweek, perception, nursing, and quality provided the frame of reference for the study. Chapter II presents a discussion of these concepts and a review of literature.

Conceptual Framework

<u>Compressed workweek</u>. The concept of the 12-hour workday, which prevailed prior to 1886 (Marshall, 1965; Rowan, 1965), was combined with the concept of the statutory workweek of 40 hours that started in 1938 with passage of the Fair Labor Standards Act as reported by Rowan. The concept that resulted was the compressed workweek of 12-hour days to average a 40-hour workweek. The compressed workweek is a method for allowing a nurse to accomplish "full-time" work in less than the standard five-day workweek (Cohen & Gadon, 1978). Essentially, the tradeoff under the compressed workweek system is that the nurse works longer daily hours for more days off.

<u>Perception</u>. The phenomenon of perception is neither unique to any one individual nor a recent discovery. Perception, however, is functionally selective and no one perceives everything in the internal or external environment to be perceived (Engel, Kollat & Blackwell, 1968; Krech & Crutchfield, 1948; Morgan & King, 1966; Tosi & Carroll, 1976).

Therefore, the central premise of functionally selective perception undergirded the study.

"Perception has been the subject of intensive inquiry for decades" (Engel, et al., 1962, p. 95). "In a thriving, living, behaving system in which matter, energy, and information are exchanged within the system as well as with its environment, perception plays an important role" (Yura & Walsh, 1973, p. 50). Patients and nurses are both thriving, living, behaving systems who exchange matter, energy, and information within the system as well as with the environment; therefore, perception plays an important role in the lives of patients and nurses.

Since perception involves both sensory data from present stimulation and learning gained from past experiences (Ruch, 1963), no two people are likely to perceive an object or an event exactly alike (Walters & Paul, 1970). Ruch (1963) exemplified the importance of perception by demonstrating that a person's reaction to any situation was based on the way that person, such as the patient or the nurse, perceived the situation. Ruch further purported that the same objective situation can be perceived in two quite different ways by the nurse and by the patient or even by either the nurse or the patient at two different times.

Morgan and King (1966), as well as Krech and Crutchfield (1948), contend that perception has many characteristics of which the more ' obvious one is selectivity. Krech, Crutchfield, and Ballachey (1962) augment the above contention when they described both the selective and the halo involvement in perception. Of the various events around us concerning selectivity, we attend to only a few (Krech, et al., 1962;

Morgan & King, 1966; Walters & Paul, 1970). Morgan and King purported that both external forces, such as intensity and size, and internal forces, such as motives and expectancy, affect what a person selects to perceive. Krech, et al., (1962) agrees with Morgan and King that the first step in responding to another person is to form an impression of him by observing actions, voice and expressive movements, and what the person says and does in response to the perceiver and other people and/ or objects. Following the input of this information, Krech, et al., (1962) argued that the perceiver makes inferences about the perceived person's cognitions, wants, feelings, goals, attitudes, and personality traits. Further actions are guided by these judgments. Influencing the perceiver are the effects of needs, mental sets, and moods of the perceiver (Krech & Crutchfield, 1948). In hospitals, patients could be perceived as belligerent and therefore avoided when, in reality, the patient may have lacked adequate physical capabilities to fully perceive the environment and, therefore, actually have exhibited fearful behavior. Regarding the nurses, they may have been perceived as calloused and harried when they rushed about or communicated in short abrupt sentences when, in actuality, at any other time any one of the nurses could be the exact opposite in personality and overt behavior.

In addition to selectivity, Krech, et al., (1962) argue that the halo effect is another important characteristic influencing perception. A perceiver may exaggerate the homogeneity of the personality of an individua! with favorable or unfavorable impressions gained from general life experiences. These impressions, Krech, et al., (1962) contend, influence the perceiver's judgment of specific traits of the perceived

individual. Favorable impressions, therefore, tend to lead to high judgment on desirable traits and low judgment on undesirable traits. The converse is true for unfavorable impressions. Consequently, how a patient or a nurse perceives the nursing care could depend on how the care giver or receiver is perceived.

The final characteristic or perception discussed is motivation.

Motivations, learned and unlearned, also affect the perception of situations....Where people are emotionally involved, they tend to see what they want to see, hear what they want to hear, and believe what they want to believe. (Morgan & King, 1966, p. 365)

Krech and Crutchfield (1948) support the fact that some type of emotional involvement is usually present in every individual. Moreover, Morgan and King (1966) further emphasized that when people perceive complex situations, such as social and interpersonal relationships, their own internal needs and biases motivate their perception of these events. Through the process of nursing care, during a hospitalization, new interpersonal relationships develop (King, 1968) and there are entire changes in social relationships. When changing relationships are coupled with emotional involvement, the patients' and the nurses' perceptions of nursing care are individually motivated. Perceptions, therefore, are not universal but influenced by each persons motives.

Thus, the nurse, as a unique perceiving person in interaction with a client who is also a unique perceiving person, comprises the system of nursing whose goal is to meet...nursing needs of citizens. (Yura & Walsh, 1973, p. 65)

In meeting the citizens' nursing needs, Bennett and Foster (1982) purported that the quality of nursing was measured by the nurse's actions, which elicited the patients' behavioral and physiological

responses. Perception is a multifaceted phenomena individualized to every person, yet generalized in that stimuli must be present in order for individual perception to occur.

<u>Nursing</u>. Nursing is a broad concept which includes the more specific concepts of research, teaching, and practice. Although all three concepts were pertinent and interrelated, only the concept of practice was further investigated. King defines nursing as:

A process of action, reaction, interaction, and transaction whereby nurses assist individuals of any age group to meet their basic human needs in coping with their health status at some particular point in their life cycle. (1968, p. 27)

King further specified that five concepts were needed as a basis for a nurse to practice nursing: (a) social institutions which in the study is the private hospital, (b) health which is what the nurses and patients want from the nursing care, (c) communication which is the art of conveying thoughts, (d) interpersonal relationships which is the central focus of the nursing process, (e) perception which is how individuals view the world about them from their own perspective. Together all five concepts provide a basis for nursing care, which is a part of the broader concept--the practice of nursing.

In nursing, the individual nurse, according to King (1971), is an integral part of her conceptual frame of reference for nursing and needs to be aware of what the patients' and nurses' perceptions are of self, others, and events. The nurse must also be aware of what the patients' perceptions are of the nurse. Ideally, in nursing, there will be no conflict between the perceptions of nurses and patients.

Quality. A specific definition of the concept of quality nursing care remains elusive. Donabedian (1969) maintains that a relationship between quantity and quality of nursing care exist. Absence of minimum care connotes poor quality just as much as excessive care which may be the result of a provider who used poor judgment based on inadequate perceptions. Donabedian (1980) emphasized that the quality of the process of care is defined as normative behavior that contributes to valued consequences. Every individual will have his or her own unique definition of quality, and in connection with nursing care, usually reflects the values and goals current in the medical care system and in the larger society of which it is a part. An important aspect of the interpretation of the values and goals is the individual motives affecting each person's perception.

In further analysis of the concept of quality, there is agreement among many authors (Abdellah & Levine, 1979; Bailit, Lewis, Hockheiser, & Bush, 1975; Chance, 1980; Donabedian, 1969; Hegyvary & Haussman, 1976b) that structure, process, and outcome are interrelated and must be evaluated accordingly. Most authors, however, look only at one or two of these factors in relation to quality. Variables associated with structure include high ratio of registered nurses to patients and lower staff absenteeism rates (Jelinek, 1976), better leadership and greater staff satisfaction (Hegyvary & Haussman, 1976a). When quality is defined , in terms of criterion variables, Chance (1980) as well as Wandelt and Ager (1974) contend that actions directed toward meeting patients' psychosocial and physical needs, communications, and care are reflective

of initiative and responsibility. The outcome variable, however, is suggested by many authors (DeGeyndt, 1970; Donabedian, 1966 & 1980; Graham, 1978) to be the most concrete indicator of quality. Donabedian (1966) purported that outcome is seldom questioned; moreover, many outcomes tend to be fairly concrete and, as such, seemingly amenable to more precise measurement. Outcome variables associated with quality in nursing include: compliance with care (Chang, 1980; Hegyvary & Haussman, 1976a); amount of responsibility a patient assumes for his or her behavior and an increase in relevant health knowledge (Zimmer, 1974); and patient satisfaction (DeGeyndt, 1970; Donabedian, 1982; Polit & Hungler, 1978; Schulz & Johnson, 1976).

Several authors have investigated the relationship of the concepts of quality to nursing care and used the three variables of structure, process, and outcome (DeGeyndt, 1970; Donabedian, 1982; Hegyvary & Haussman, 1976a; Krech, et al., 1962; Polit & Hungler, 1978; Schulz & Johnson, 1976). Whereas Hegyvary and Haussman (1976a) looked at staff satisfaction as structure, DeGeyndt (1970), Donabedian (1982), Polit and Hungler (1978), and Schulz and Johnson (1976) used patient satisfaction as the outcome variable as a basis to assess quality in association with nursing care. Donabedian (1982), even though he did not include provider satisfaction as an element in the concept of quality, recognized its importance: "The satisfaction of the providers of care reflects certain - features of the conditions under which care is provided, may contribute to good professional performance, and may also be a judgment on that performance" (1982, p. 4). Patient satisfaction, Donabedian also argues, is the patient's judgment on those aspects of the quality of nursing care

concerning which the patient is the most trustworthy arbiter. These judgments are based on the perceptions of the nurses or patients (Krech, et al., 1962).

The concept of perception is not only significant in its own right, but is an essential thread throughout quality and nursing. The compressed workweek was the connecting link between quality, nursing, and perception and the patient and nurse interreacting through nursing care. Consequently, these concepts of compressed workweek, perception, nursing, and quality formed the conceptual framework for the study.

Review of Literature

Satisfaction whether on the part of patient or nurse is only one determinant of the multifaceted concept of quality nursing care. While an attempt was made to evaluate quality of nursing care as determined by perceived satisfaction in the context of a compressed workweek consisting of 12-hour days, a striking void was found in the empirical literature. When the 12-hour day was analyzed for the industrial world, both advantages and disadvantages were determined by Cohen and Gadon (1978). The advantages were: an increased productivity; decrease in absenteeism, tardiness, and turnover; increase in leisure time; easier commuting; better family relations; and finally, society benefited economically. The disadvantages included: adverse effects on the employer, the work, and the employee from fatigue; household work became more difficult to manage; and finally, more demands were being placed on society.

<u>Compressed workweek, quality, and perception</u>. Few studies about the compressed workweek of 12-hour shifts, quality of nursing care, and

perception have been conducted in connection with a hospital. Safford and Schlotfeldt (1960) focused on quality of nursing care when they developed questionnaires for patients and nursing staff to evaluate care whether received or given. The basic study was conducted in a 340-bed, acute, general hospital operated under municipal control. The sites of the study were two ward units, one 36-bed surgical unit housing private patients and one 65-bed medical unit housing both private and staff patients. Safford and Schlotfeldt's study was aimed at establishing an instrument to assess quality of nursing care in relationship to increased numbers of patients cared for by a nursing team. A relevant finding which related to the present research was an indication that patients either differed from personnel in their perception of quality nursing care given, or that patients may have identified with nurses and were reluctant to report less than high quality nursing care.

Looking at quality as well as the 12-hour shift, Ganong, et al., (1976) published a report which was the conclusions of Harrison's research on the 12-hour schedule during administrative residency at Medical Park Hospital, Winston-Salem, North Carolina. He used questionnaires, which were only described as detailed and nine pages, to evaluate attitudes in nurses, patients, doctors, administration, and support service personnel. The results, Harrison concluded, were better utilization of nursing personnel, a financial savings, better nurse-patient > relations, greater time off for the nurses and lower turnover; additionally, patients returning questionnaires reinforced the belief that quality of nursing care is enhanced by the 12-hour shift schedule. Many of his findings closely paralleled those of the industrial world.

Compressed workweek. Vik and MacKay's (1982) study also focused on the 12-hour shift; however, several limitations should be carefully assessed before attempting to generalize the results. Some of the limitations included sampling periods where the eight-hour and 12-hour shifts were compared at the beginning, the end of the eight-hour shift compared to the middle of the 12-hour shift, and the beginning of a new eight-hour shift compared to the end of a 12-hour shift. Additionally, some observation period scores were positively influenced by the head nurse visiting the patient, but there were no indications of what scores were effected. Their study was conducted in a large, general, teaching hospital. The sample consisted of 57 or 60 patients (variations existed in reported figures), and the instrument was the Quality Patient Care Scale (QualPacs). Vik and MacKay reported that patients cared for by nurses working eight-hour shifts received better care than did patients cared for by nurses working 12-hour shifts. Even though Vik and MacKay's study had severe limitations, it is significant in that quality of nursing care with the patient as the focus is being assessed when variations were made in the nurses workweek.

Perception. In looking at perception, Houston and Pasanen (1972) used a 64-question home interview-questionnaire on 284 patients in the Medical Center Hospital of Vermont, a 564 bed teaching hospital. The patients were asked their perception of many aspects of their hospital stay. Contrary to Safford and Schlotfeldt (1960), Houston and Pasanen found, "The patient sees the hospital quite differently than does its staff" (1972, p. 70). They found that actual events recorded by staff members to reflect lower standards than perceived by patients. For

example, the patients' responses were generally favorable, however, the staff indicated the patients' had a lack of knowledge, and the hospital atmosphere could be improved. The study again demonstrated that perception is varied among individuals.

Compressed workweek and quality. A limited number of studies have been conducted which focused on 12-hour shifts, quality, and perception. Eaton and Gottselig (1980) studied 24 registered nurses ranging in age from 21 to 48 years employed in a medical-surgical intensive care unit of a metropolitan hospital. The subjects were pretested one month prior to the implementation of the 12-hour shift and post-tested after six months of working the 12-hour shift. The study was designed to determine the effects of the 12-hour shift on five major variables using published and private instruments: (a) job satisfaction using the Minnesota Satisfaction Questionnaire; (b) work environment using The Work Environment Scale; (c) health status of the nurses using The Personal Health Survey; (d) fatigue and alertness of the nurses using physiological data including direct observations, body temperatures, and reaction times obtained every two hours; (e) quality of patient care using a private, non-published, author devised instrument titled Nurses Perception Questionnaire and a retrospective chart audit; and (f) administrative demographic data which analyzed rate of turnover, rate of sickness and accidents and injuries. The findings included: (a) a significant increase in job satisfaction (t value of 2.28, p<.03); (b) no significant</p> difference in The Work Environment Scale; (c) a significant decrease in subjective symptomatology in many areas as exemplified by General Health
(t=2.56, p<.017); (d) no significant differences existed between overall reaction time associated with both shift conditions; however, some differences were apparent in the body temperatures between those working day and night shifts and those working the eight-hour and 12-hour shifts; (e) there were no indications in the chart audit or the nurses perception that quality of care decreased as a result of the 12-hour shift. Concerning the Nurses Perception Questionnaire, the only significant results were in relation to the specific areas of general job satisfaction (t=2.069, p<.05) and satisfaction with the work rotation schedule, especially outside activities and interest. Other findings included less difficulty adjusting to shift-work due to increased time off, feeling more rested, no increase in average sick time per employee, no increase in accidents or incidents, and a decrease in the nurses termination rate. A primary finding was that the nurses did not perceive any decrease in quality of nursing care and it was reinforced by a factual chart audit. Again, the emphasis was placed on the nurses' indirect benefits rather than those of the patients.

Quality. Atwood and Hinshaw (1977) assessed the outcome of care to evaluate quality by assessing both nursing staff and client outcomes after administrative intervention and change in staffing patterns. The assessed outcomes were the quality of care delivered and received and the subjective satisfaction with that care. All members of the nursing , staff (phase 1, N=18; phase 2, N=15) and patients (phase 1, N=17; phase 2, N=21) on a unit in a southwestern regional medical center hospital participated in the study. The nurse's and client's perception of direct quality care was measured by tools that were described as being in

early development stages by WICHE-targeted research group. Risser's (1975) scale was also used to assess the client's satisfaction with the nursing care. Concerning the quality of direct care, neither the patients nor the nurses showed significant differences in how they perceived the nursing care after changes in the staffing ratio. However, the Patients' Satisfaction with Nursing Care Scale had lower satisfaction levels in areas of technical skill (\underline{t} =4.20, \underline{d} . \underline{f} .=20, \underline{p} <.00, Note 1) and trust (\underline{t} =3.42, \underline{d} . \underline{f} .=30, \underline{p} =.002) after the changes in staffing patterns. Atwood and Hinshaw's study was an excellent example of how important it is to obtain the perception of both care givers and receivers when any change is initiated.

Quality and satisfaction. In 1975, Risser conducted a study during which time she developed a tool to measure patient satisfaction with nursing care in primary care settings. The significance of her study was the fact that she was using patient satisfaction as a determinant of quality care. Furthermore, Risser incorporated perception as a basis of satisfaction into the study. She submitted questionnaires to patients in 11 general practitioner and internist offices in two metropolitan area clinics where registered nurses were employed. Usable returns consisted of 78 in the first trial and 60 in the second trial. Her final scale had a resulting reliability of .912 as estimated by Cronbach's Alpha Ratio, and a coefficient of .302 by Scott's Homogeneity Ratio.

Content validity was determined through the method of item selection and revision. Since the distribution of scores was found to be positively skewed, Risser considered that it indicated content validity because other estimates of patient satisfaction exhibited similar skewness.

Risser had demonstrated one way to measure the elusive concept of quality--perceived satisfaction with nursing care.

Summary

The conceptual framework explored how the compressed workweek containing 12-hour shifts each workday evolved. Perception was shown to be selective and dependent upon sensory data from present stimulation and learning from past experiences. King's (1968) definition of nursing was given as an action, reaction, interaction, and transaction whereby nurses assist patients to meet their basic needs. Furthermore, in order to practice nursing, King (1968) stipulated that nurses must use perception in viewing the patient. The quest for quality was conceptualized in terms of structure, process, and outcome; moveover, satisfaction of nurses and patients was determined to be the central point of the quality concept. Operationally, the following assumptions undergirded this study: (a) that nurses' or patients' reactions to situations are based on how the individual perceived the situation, (b) satisfaction by nurses and/or patients is a way to obtain a measure of quality nursing care, and (c) quality of nursing care can be measured by the perceived satisfaction of patients and nurses within the context of the compressed workweek.

The review of literature focused on published studies concerning compressed workweeks, perception, satisfaction with nursing care, and quality. The indirect benefits to the nurses such as additional time off and direct benefits to administration such as cost savings were addressed in relation to the compressed workweek by Ganong, et al.,

(1976) and Eaton and Gottselig (1980) and favorably compared to Cohen and Gadon's (1978) information concerning industry. Safford and Schlotfeldt (1960) disagreed with Houston and Pasanen (1972) when Houston and Pasanen concluded that patients see the hospital different than the nurses. Two studies (Risser, 1975; Safford & Schlotfeldt, 1960) were conducted to develop instruments which gave a measure of quality of nursing care. A significant point concerning these studies was that perception of satisfaction with nursing care was basic to both research projects. Harrison, working with Ganong and Ganong, published just the conclusions of his research. Again, results were similar to those in the business world; however, one portion was devoted to the patients who reinforced a belief that the 12-hour shift schedule enhanced quality nursing care. Perception of both the care giver and receiver was essential to Atwood and Hinshaw when they evaluated the outcome component of quality. Vik and MacKay's study focused on the 12hour shift and quality of nursing care, but several limitations precluded further generalizations. In conclusion, the literature review reflected diverse findings, little agreement, and inconclusive or poorly supported results concerning quality of nursing care, perception, and the 12-hour shift of the compressed workweek.

It is the researcher's contention that before a compressed workweek can be called acceptable, all aspects must be studied. Included in these aspects is the quality of nursing care as determined by level of satisfaction. The intent of the researcher, therefore, was to investigate the quality of nursing care as perceived by patients and as perceived by registered nurses who worked a compressed workweek.

CHAPTER III

METHODOLOGY

The introduction to the study, the conceptual framework, and the review of literature were presented in Chapters I and II. Presentation of the methodology which included the research and instrument designs was the purpose of this chapter.

Research Design

A correlation survey was the design of the study. The purpose of the research was to investigate the quality of nursing care as perceived by patients and as perceived by registered nurses who worked a compressed workweek.

Approval of the Study

Permission and approval for the study were obtained from both a Thesis Committee and the Human Subjects Review Committee of the School of Nursing at the University of North Carolina at Greensboro (Appendix A). A formal research proposal was submitted to each group specifying the plans, purposes, and intentions of the study. Prior to any data collection, written permission to conduct the study using the format for Agency Consent (Appendix B) was obtained from the Executive Director/ Hospital and the Associate Executive Director/Nursing.

Setting

The study was conducted in one, 100-bed private, investor-owned hospital located in the southeast United States within an urban setting.

The hospital was accredited by the Joint Commission on Accreditation of Hospitals and the Department of Human Resources of the state in which it was located. Since 1977, the hospital has been a member of the Federation of American Hospitals and the ______ Hospital Association. In 1978, the facility established contracts with Blue Cross/Blue Shield Health Insurance and, in 1980, it became a member of the American Hospital Association.

The hospital's philosophy was operationalized as being a business with a "product or service to sell--quality health care" (Note 2). Of significance, the patients were considered customers and were "satisfied that their needs [were] being met through the product or service that the business [had] to sell" (Note 3).

In support of the philosophy and having final responsibility for the hospital administration was the Board of Trustees. Members of the board included lay and professional men and women. Reporting directly to the Board of Trustees was the Executive Director/Hospital. Next in the chain of command were one Assistant Executive Director, one Associate Executive Director/no specific department, one Associate Executive Director/Finance, and one Associate Executive Director/Nursing.

The Department of Nursing was the responsibility of the Associate Executive Director/Nursing. Nursing personnel defined nursing as being "concerned with the client as a total human being seen along the healthillness continuum" (Note 4). Quality nursing care was considered that which was adaptable to the needs of the individual, family and community during health and illness (Note 5). Therefore, registered nurses "provide effective, comprehensive, client-centered nursing care through

adoption of the primary nursing care modality" (Note 6). Each registered nurse was assigned to one of two hospital nursing units which were essentially the same in size and in distribution of patients without consideration of diagnosis. Four nurse managers alternated responsibility for the two units while each unit was assigned a clinical manager. The nurses worked in groups of six to seven, with one charge nurse and a patient care attendant assigned to each group. Assigned to each clinical unit were four, twelve-hour groups that alternated between time on and off duty.

The facility offered clinical laboratory learning opportunities for students enrolled in degree granting programs: Associate, Bachelor of Science, and Master of Science, and also for student dietitians and laboratory technicians. No students were present during data collection.

Patients admitted to the facility were from diversified economic, cultural, occupational, educational, and religious backgrounds. Subacute, medical and surgical adult care were offered this patient population.

Sample

<u>Available population</u>. The available population from which the sample was obtained was a total of 49 medical-surgical patients, and 53 registered nurses who were assigned to these patients. Neither nurses assigned to nor patients located in the operating room, recovery room, emergency room, or acute care units were included in the total population.

Registered nurse sample. Established criteria were set forth in selection of the registered nurse sample. They were: (a) current

license to practice as a registered nurse in the state of the study, (b) employment by the facility in the study to work in a medical-surgical unit, and (c) membership in one of the three distinct employment groupsfull-time, permanent part-time, or pool. Full-time nurses were assigned 12 hours of duty each working day. The permanent part-time nurses had six hours of duty each day, while the pool nurses were assigned either six or 12 hours of duty each working day.

Of the total 53 registered nurse population, 35 (66 percent) nurses completed and returned the questionnaire. See Table 1 for the registered nurse sample by employment.

Table 1

Registered Nurse Sample by Employment

| Employment | Frequency | Percent |
|---------------------|-----------|---------|
| Permanent Full-time | 24 | 68.57 |
| Permanent Part-time | 4 | 11.43 |
| Pool | 7 | 20.00 |
| Total | 35 | 100.00 |

Delineated in Table 2 is the distribution of the all female registered nurse sample by age, ethnic group, and education. The extremes in the age category were 12 nurses (34.3 percent) from the 18 to 27 age range in years, in contrast to one nurse (2.9 percent) who was within the 48 to 57 age range. More than 85 percent of the sample were members of the white ethnic group. The educational level of the nurses was

| Table | 2 |
|-------|---|
|-------|---|

Registered Nurse Sample: Age, Ethnic

Group, and Education

| Category | Frequency | Percent |
|----------------------|-----------|---------|
| ge Range in Years | | |
| 18-27 | 12 | 34.3 |
| 28-37 | 11 | 31.4 |
| 38-47 | 11 | 31.4 |
| 48-57 | _1 | 2.9 |
| Total . | 35 | 100.0 |
| hnic Group | | |
| Black | 3 | 8.6 |
| White | 31 | 88.5 |
| Other | _1 | 2.9 |
| Total | 35 | 100.0 |
| lcation | | |
| Diploma | 10 | 28.6 |
| Associate Degree | 12 | 34.3 |
| Baccalaureate Degree | <u>13</u> | 37.1 |
| Total | 35 | 100.0 |

almost equally distributed: 10 (28.6 percent) had earned a diploma in basic nursing, 12 (34.3 percent) had received the Associate Degree in Nursing, and 13 (37.1 percent) had the Baccalaureate Degree.

Portrayed in Table 3 are the hours, shift, and work history of the registered nurse sample. Eighteen (51.4 percent) were assigned to the

· .

.

| | | Table 3 | | |
|------------|--------|-----------|--------|--------|
| Registered | Nurse | Sample: | Hours, | Shift, |
| ٠ | and We | ork Histo | ry | |

| Category | Frequency | Percent |
|-----------------------|-----------|---------------|
| ours | | |
| Days (7 a.m 7 p.m.) | 18 | 51.4 |
| Nights (7 p.m 7 a.m.) | 15 | 42.9 |
| Rotating | _2 | 5.7 |
| Total • | 35 | 100.0 |
| ft | | |
| 6-Hour | 10 | 28.6 |
| 12-Hour | 24 | 68.6 |
| 6- and 12-Hour | _1 | 2.8 |
| Total | 35 | 100.0 |
| k History | | |
| 3-hour shifts: | | |
| Have worked | 29 | 82.9 |
| Have not worked | 6 | <u>17.1</u> |
| Total | 35 | 100.0 |
| 10-hour shifts: | | |
| Have worked | 8 | 22.9 |
| Have not worked | <u>27</u> | <u>. 77.1</u> |
| Total | 35 | 100.0 |

7 a.m. to 7 p.m. shift, whereas 15 (42.9 percent) were assigned to the 7 p.m. to 7 a.m. shift. Of the total 35 nurses, 24 (68.6 percent) worked 12-hour shifts while 10 (28.6 percent) worked six-hour shifts. Only one nurse (2.8 percent) worked both the six- and 12-hour shifts. The remaining data centered on work history. Of interest, the work history revealed that 21 (82.9 percent) of the total sample had worked eight-hour shifts while 27 (77.1 percent) had never worked a 10-hour shift.

Table 4 displays the measures of central tendency in months whereby each registered nurse worked six- or 12-hour shifts. The six-hour shift reflected a mean of 33.27 months, with a median of 36 months, and a trimode of 4, 36, and 72 months. The 12-hour shift revealed a greater spread of the range than did the six-hour shift, and only reflected a mode of 36 months with a 27.75 mean.

Table 4

Registered Nurse Sample: Central Tendency by Months of six- and 12-hour Shifts

| Shift | Median | Mode(s) | <u>x</u> | <u>SD</u> | Range |
|---------|--------|-----------|----------|-----------|-------|
| 6-Hour | 36 | 4, 36, 72 | 33.27 | 24.95 | 3- 72 |
| 12-Hour | 28 | 36 | 27.75 | 25.50 | 1-132 |
| | | | | | |

<u>Patient sample</u>. Criteria for the patient sample were established such that they were classified as inpatients on a medical-surgical unit. The patient also had to be at least the legal age of 18 years, but at or

less than the full Social Security eligibility retirement age of 65 years (Boskin, 1981).

Of the total 49 patient population, 33 (67.35 percent) completed and returned the questionnaire. Table 5 presents the patient sample according to sex, age, ethnic group, and education. The sample consisted of 23 (69.7 percent) females and 10 (30.3 percent) males. Of interest was that 10 (30 percent) of the patient sample were in the age range of 38-47 years whereas only three were in the age range of 18-27 years. In the ethnic group, 23 (69.7 percent) were white, nine (27.3 percent) were black, and one (3 percent) was listed as other. A high school education was obtained by 19 (57.6 percent) of the patients, while 11 (33.3 percent) obtained levels of technical to masters education.

Shown in Table 6 are the days spent in the hospital by the patient sample. More than three-fourths of the patient sample had been hospitalized from one to seven days. In contrast, only one (3 percent) had been hospitalized less than one day and six (18.2 percent) more than seven days.

Questionnaires

<u>Basis</u>. Based on satisfaction with nursing care, Risser (1975) developed the Patient Satisfaction Scale to measure patient satisfaction with nurses and nursing care in the outpatient department of primary health care settings. Her instrument was the basis of the questionnaires used in this study. Risser's instrument consisted of 25 Likert-type questions which gave a measure of satisfaction with nursing care through perception. The reliability coefficient of the scale was .302 according

| Tabl | e 5 |
|------|-----|
|------|-----|

.

Patient Sample: Sex, Age, Ethnic

| Group, | and | Education |
|--------|-----|-----------|
|--------|-----|-----------|

| Category | Frequency | Percent |
|-----------------------------|-----------|---------|
| Sex . | | |
| Male | 10 | 30.3 |
| Female | <u>23</u> | 69.7 |
| Total | 33 | 100.0 |
| Age Range in Years | | |
| 18-27 | 3 | 9.1 |
| 28-37 | 6 | 18.2 |
| 38-47 • | 10 | 30.3 |
| 48-57 | 6 | 18.2 |
| 58-67 | _8 | 24.2 |
| Total | 33 | 100.0 |
| Sthnic Group | | |
| Black | 9 | 27.3 |
| White | 23 | 69.7 |
| Other | _1 | 3.0 |
| Total | 33 | 100.0 |
| Education | | |
| Grade School | 3 | 9.1 |
| High School | 19 | 57.6 |
| Technical School | 7 | 21.2 |
| Junior or Community College | 2 | 6.1 |
| Baccalaureate | 1 | 3.0 |
| Masters | 1 | 3.0 |
| Total | 33 | 100.0 |

| Days in Hospital | Frequency | Patient |
|--------------------|-----------|---------|
| Less than One Day | 1 | 3.0 |
| One to Three Days | 15 | 45.5 |
| Four to Seven Days | 11 | 33.3 |
| Over Seven Days | _6 | 18.2 |
| Total | 33 | 100.0 |

Table 6 Patient Sample: Days in Hospital

to Scott's Homogeneity Ratio and a reliability coefficient of .912 by Cronbach's Coefficient Alpha when tested on 52 subjects. According to Risser:

in this study the large number of items collected from a variety of sources...should ensure some degree of content validity. Although construct validity was not established in this study, the positive skewing of scores...provided one evidence of construct validity. (1975, p. 50)

Hinshaw and Atwood (1982) altered one question to make the tool applicable to inpatient hospital subjects. "In the item, 'The nurse gives good advice over the telephone,' the phrase 'over the telephone' was deleted" (Hinshaw & Atwood, 1982, p. 171). The revised tool was tested for reliability and validity in five studies conducted in two states over an eight-year period on samples ranging from 52 to 309 in number. The total consisted of approximately 600 inpatients and outpatients from primarily medical and surgical services.

<u>Reliability</u>. Hinshaw and Atwood's (1982, p. 172) revised form of Risser's Patient Satisfaction Scale was divided into the three

subscales of technical-professional, educational, and trusting relationship. The technical-professional subscale Coefficient Alpha met the new psychosocial scale criterion of α =.70 for four out of five trials. The educational subscale Coefficient Alphas not only met the new psychosocial scale, but exceeded the mature scale criterion (α =.83 to .95). Similar patterns were noted for the trusting relationship subscale for estimates of internal consistency. All the alphas exceeded the mature scale criterion by ranging from $\underline{\alpha}$ =.82 to .98. Consistency was assessed within the total instrument through review of intercorrelations among the three subscales. Hinshaw and Atwood further documented that the subscale-subscale correlation matrix revealed consistency within the total instrument due to seven of 21 correlations which met the r=.55 to .70 criterion. Of the 14 correlations which remained, eight were greater than .70 and indicated some multi-collinearity. The Patient Satisfaction Scale was therefore judged to be internally consistent and, according to the coefficient alphas, can be judged relatively reliable.

<u>Validity</u>. For three of the five studies, Hinshaw and Atwood described three construct validity techniques which were used: convergent and discriminant strategy, discriminance, and predictive modeling. In convergent and discriminant strategy, validity estimates were obtained by the degree to which the traits converged and diverged as theoretically predicted. The results showed a correlation among the patient satisfac-< tion subscales in one study ranging from .80 to .90 (1982, pp. 173-174). Overall, the convergent and discriminant strategy provided an estimate of moderate to strong construct validity. Discriminance estimates of

construct validity were strong for the technical-professional and trusting relationship subscales (\underline{F} ratio = 4.0 to 4.3 and \underline{t} = 4.02 to 4.13 at p<.05); however, substantiations for the educational subscale were weak to moderate (\underline{F} ratio = 4.0 and \underline{t} = not significant to 3.83 at p<.05). Finally, moderate validity was estimated on the basis of the predictive modeling technique. "Considering the numerous validity estimates used across successive samples, moderate to strong validity exist for the Patient Satisfaction Instrument in general" (Hinshaw & Atwood, 1982, p. 175).

Instrument development procedure. The purposes of the study, the identification of the hypotheses, the conceptual framework, and the review of literature provided a base for the researcher's questionnaires. Based on the statistically significant reliability and validity as established by Hinshaw and Atwood (1982), no further testing was done. It was further decided that no subscales would be used.

The questionnaire developed by Risser (1975) and studied at length by Hinshaw and Atwood (1982) was used as a basis for the current research tools (Appendix D & E). In order to make both instruments applicable and individualized to both the patient and nurse population in the study, some items in Risser's instrument were eliminated and others revised. Nineteen of the total 25 questions were used in the researcher's questionnaire. In addition, only two researcher-devised items were added to the patient questionnaire and to the nurse questionnaire. They were for the patients: (a) I am satisfied with the nursing care I receive from the nurses, and (b) I feel I receive high quality nursing care from the nurses. The items on the nurses questionnaire were: (a) I am

satisfied with the nursing care I give patients, and (b) I feel I give high quality nursing care to the patients. The instruments were paired concerning the stem of each item. The resulting instruments were devised to obtain a measure of the patients' and of the nurses' perception of satisfaction and were titled, Patients Satisfaction Questionnaire (Appendix F), and Registered Nurses Satisfaction Questionnaire (Appendix G).

The reliability and validity of the researcher's instruments were considered established by Hinshaw and Atwood (1982) during their extensive studies of the original Risser instrument. Thus, the current instrument was essentially a slightly modified replication of the original instrument and was not retested for validity and reliability. Face and content validity were considered present.

Instrument Design

Each instrument consisted of two parts. Part I--Perception of Nursing Care--contained 19 modified questions out of a possible 25 from Risser's (1975) scale and two researcher-devised questions for a total of 21 questions.

The researcher-devised items were based on the needs of the study. Satisfaction with nursing care was considered by some authors (Abdellah & Levine, 1979; Chance, 1980; DeGeyndt, 1970; Donabedian, 1982; Stufflebeam, 1971) as an indicator of quality nursing care. Thus, each instrument was modified to obtain a measure of satisfaction with the nursing care as perceived by patients and nurses. How the patients and nurses perceived the quality of their nursing care was also directly related to

the purpose of the study. Items 20 and 21 related to the elements of satisfaction and quality of nursing care.

Part II--Demographic Data--consisted of five items for the patients and 11 for the nurses. The characteristics of both groups were ascertained and included sex, age, ethnic group, and education. The patients were further questioned regarding the length of their hospital stay, while the nurses work history was more precisely determined.

Scoring

Scoring on both the Registered Nurses Satisfaction Questionnaire and the Patient Satisfaction Questionnaire consisted of marking each item as either 1-Strongly Agree, 2-Agree, 3-Neutral, 4-Disagree, or 5-Strongly Disagree. Scoring was consistent as established by Risser (1975, p. 49). Items 1, 2, 3, 4, 8, 10, 12, 15, 17, 18, and 19 were scored as marked from 1 to 5. Items 5, 6, 7, 9, 11, 13, 14, and 16 were scored in reverse. An answer of a 1 would be added in as a 5, a 2 added in as a 4, a 3 remained unchanged in addition, a 4 added in as a 2, and a 5 added in as a 1. Items 1 thru 19 were scored as a group and the lowest possible score was 19, which would represent the highest satisfaction and perception of quality nursing care. The maximum possible score was 95 which equated to no satisfaction and perception of poor quality nursing care.

Items 20 and 21 were marked as either 1-Strongly Agree, 2-Agree, 3-Neutral, 4-Disagree, or 5-Strongly Disagree. In each item, a score of 1 indicated high satisfaction and perception of quality nursing care,

while a score of 5 indicated no satisfaction and perception of poor quality nursing care.

Data Collection

Data were collected during the middle two weeks in January 1983. The researcher obtained permission from the Executive Director/Hospital and the Associate Executive Director/Nursing where the study was conducted to give the registered nurses who met stated criteria a questionnaire and a verbal explanation (Appendix H) of their involvement. The verbal explanation provided the following information:

- (a) the researcher was a registered nurse and a student in a Master of Science in Nursing program;
- (b) as part of the requirements for the degree the researcher was conducting a study to investigate if there was a difference between how nurses perceive the quality of nursing care they administer and how the patients perceive the quality of nursing care received;
- (c) permission had been obtained from the administration of the nursing department and the hospital to conduct the study;
- (d) the questionnaire would require approximately 10 minutes to complete;
- (e) participation must be voluntary;
- (f) participants may withdraw from the study without prejudice or duress at any time until the questionnaire is completed and returned;

- (g) participation or non-participation will not affect employment in any way;
- (h) there are no anticipated benefits, discomfort, or risks [toyou] associated with participation in the study;
- (i) questionnaires were to be placed in an attached envelope and then either placed in a provided receptacle or handed to the researcher;
- (j) the results of the study may be published at some future date;
- (k) the identity of the respondents would not be revealed at any time; and,
- the nurse's consent would be obtained by the return of the completed questionnaire.

Permission was also obatined for the researcher to give the patients who met stated criteria a questionnaire and a verbal explanation (Appendix I) of their involvement, and then, personnally collect the patients' questionnaires. The verbal explanation provided the following information:

- (a) the researcher was a registered nurse and a student in a Master of Science in Nursing program;
- (b) as part of the requirements for the degree the researcher was conducting a study to investigate if there was a difference between how the nurses perceive the quality of nursing care they administer and how the patients perceive the quality of nursing care received;
- (c) permission had been obtained from the administration of the nursing department and the hospital to conduct the study;

- (d) the questionnaire would require approximately 10 minutes to complete;
- (e) participation must be voluntary;
- (f) participants may withdraw from the study without prejudice or duress at any time until the questionnaire is completed and returned;
- (g) participation or non-participation will not affect the patients care in any way;
- (h) there are no anticipated benefits, discomforts, or risks [to you] associated with participation in the study;
- (i) questionnaires were to be placed in an attached envelope and then returned to the researcher in 30 to 60 minutes after distribution;
- (j) the results of the study may be published at some future date;
- (k) the identity of the respondents would not be revealed at any time; and,
- the patient's consent would be obtained by the return of the completed questionnaire.

The Associate Executive Director/Nursing gave the nurse managers pemission to work with the researcher and identify nurses and patients who met the eligibility standards. For the collection of the nurses questionnaires, a box was placed on each of the two nursing units.

Method of Analysis

Statistical consultation and programming for the study were provided by the Statistical Consulting Center, Department of Mathematics,

University of North Carolina at Greensboro. The <u>Statistical Package for</u> <u>Social Sciences</u> was used for data analysis. A means rating was used to analyze how the patients perceived the quality of their nursing care and how the nurses perceived the quality of the nursing care they delivered. The <u>t</u> test, for independent samples was used to compare the registered nurses' perception of the quality of their nursing care delivered with the patients' perception of the quality of the nursing care received.

CHAPTER IV

ANALYSIS OF DATA

Introduction

The purpose of this chapter was to present the results of the correlational survey study of how nurses perceived the quality of the nursing care they delivered and how patients perceived the quality of the nursing care they received. The purpose of the study was to investigate the quality of nursing care as perceived by registered nurses who worked a compressed workweek.

The sample studied consisted of 35 registered nurses who worked a compressed workweek, and 33 medical-surgical patients in a 100-bed, private, investor-owned hospital. Data were obtained through the use of a slightly modified version of the established and published Risser Patient Satisfaction Scale (1975), and two researcher-devised questions.

Data analysis was assisted by the Statistical Consulting Center Department of Mathematics, University of North Carolina at Greensboro. The Statistical Package for Social Sciences was used.

In 1982, Hinshaw and Atwood established a high reliability and validity for Risser's Patient Satisfaction Scale. Therefore, further validation of the instrument was not considered necessary.

The results of the analysis of data are presented in the order in which the hypotheses were stated. The level of significance for rejection of the hypotheses was set at the .05 level.

Testing of H₁

 H_1 : Patients will perceive the care received from registered nurses who work a compressed workweek as quality nursing care.

A mean rating of medical-surgical patients' perceptions of satisfaction with and quality of nursing care perceived was used to determine if the patients perceived that they received high quality nursing care. Table 7 presents the mean rating of patients' perceptions of satisfaction with and quality of nursing care received of Item 20, "I am satisfied with the nursing care I receive from the nurses," and Item 21, "I feel I receive high quality nursing care from the nurses."

Table 7

Mean Rating of Patients' Perceptions of Satisfaction with and Quality of Nursing Care Received

| Perception Items | <u>n</u> | <u>x</u> | <u>SD</u> |
|------------------|----------|----------|-----------|
| Item 20Satisfied | 33 | 1.64 | . 65 |
| Item 21Quality | 33 | 1.55 | .62 |

Analysis of the data shows a mean of 1.64 with a standard deviation of .65 for satisfaction and a mean of 1.55 with a standard deviation of .62 for quality, which was considered high satisfaction. Thus, H₁ was supported.

Testing of H₂

 ${\rm H_2}\colon$ Registered nurses who work a compressed workweek will perceive care administered to patients as quality nursing care.

A mean rating of nurses' perceptions of satisfaction with and quality of nursing care perceived was used to determine if the nurses perceived that they delivered high quality nursing care. Table 8 presents the mean rating of nurses' perceptions of satisfaction with and quality of nursing care rendered of Item 20, "I am satisfied with the nursing care I give patients," and Item 21, "I feel I give high quality nursing care to the patients."

Table 8

Mean Rating of Nurses' Perceptions of Satisfaction with and Quality of Nursing Care Rendered

| Perception Items | <u>n</u> | <u>x</u> | <u>SD</u> |
|------------------|----------|----------|-----------|
| Item 20Satisfied | 35 | 2.20 | .83 |
| Item 21Quality | 35 | 2.03 | .71 |

Analysis of the data shows a mean of 2.20 with a standard deviation of .83 for satisfaction and a mean of 2.03 with a standard deviation of .71 for quality which were considered as satisfaction. Thus, H_2 was supported.

Testing of H₃

H₃: There will be no difference between the perception of registered nurses and the perception of patients as to the quality of nursing care.

The <u>t</u> test for independent samples was used to determine if there was a significant difference between the perception of the registered nurses of the quality of nursing care delivered and the patients' perception of the quality of nursing care received. Table 9 shows the quality of nursing care rendered and received--mean, standard deviation, and <u>t</u>-test results as perceived by registered purses and medicalsurgical patients.

Table 9

t-test Results: Quality of Nursing Care as Perceived

by Nurses and Patients

| Subjects perception | <u>n</u> | ž | <u>SD</u> | t |
|---------------------|----------|-------|-----------|-------|
| Nurses | 33 | 53.85 | 5.07 | -1.69 |
| Patients | 35 | 51.71 | 5.32 | |

p<.05

Analysis of the data revealed a \underline{t} score of -1.69 which was not statistically significant at the .05 level. Further analysis does reveal a mean of 53.85 with a standard deviation of 5.07 for the nurses.

The patients had a 51.71 mean and 5.32 for the standard deviation. Thus, H_3 was supported.

CHAPTER V

SUMMARY, DISCUSSION, IMPLICATIONS, AND RECOMMENDATIONS

Summary

Since hospitals are using business world techniques, such as the compressed workweek, to provide services to patients at a lesser cost, the problem investigated in the study was to determine if there was quality of nursing care as perceived by registered nurses and by patients. Therefore, the purpose of the study was to investigate the quality of nursing care as perceived by patients and as perceived by registered nurses who worked a compressed workweek.

Data were collected by use of a two-part questionnaire. Part one contained 19 questions which were a slight modification of the Risser Patient Satisfaction Scale (1975) and two researcher-devised questions. Part two-Demographic Data Sheet--consisted of five questions for the patients and 11 for the nurses.

The sample consisted of 35 registered nurses who worked either the six- or the 12-hour shift and 33 medical-surgical patients between 18 and 65 years of age. The setting was one, 100-bed private, investorowned hospital on the mideast coast of the United States within an urban setting.

Three hypotheses were established: H_1 : Patients will perceive the care received from registered nurses who work a compressed workweek as quality nursing care. H_2 : Registered nurses who work a compressed workweek will perceive care administered to patients as quality nursing

care. H_3 : There will be no difference between the perception of registered nurses and the perception of patients as to the quality of nursing care.

The <u>t</u> test for independent samples and mean rating were used in analyzing the data. All statistical analyses were done by computer using the <u>Statistical Package for Social Services</u>. All three hypotheses were supported.

Discussion of Findings with Implications for Nursing

The findings of the study must be considered in light of the sample size of 35 registered nurses and 33 patients, and the fact that data were collected in only one hospital. The results do suggest possible implications for nursing.

The study was based conceptually on the compressed workweek, perception, nursing, and quality. Operationally, the following assumptions undergirded the study: (a) nurses' or patients' reactions to situations were based on how the individual perceived the situation, (b) satisfaction by nurses and/or patients was a way to obtain a measure of quality nursing care, and (c) quality of nursing care can be measured by the perceived satisfaction of patients and nurses within the context of the compressed workweek.

Results of the study revealed that nurses and patients perceived both satisfaction and quality of nursing care. The study results compared favorably with Safford and Schlotfeldts's (1960) study which contended that patients and nurses perceived nursing care similarly. Whereas, results of Atwood and Hinshaw's (1977) study, neither the

patients nor the nurses showed significant differences in how they perceived the quality of direct nursing care after changes in a staffing ratio were implemented. In further agreement, Safford and Schlotfeldt's study (1960) depicted that patients identified with nurses and were reluctant to report less than quality nursing care. However, all results must be viewed in the context of the degree of quality nursing care perceived.

The process of patients identifying with nurses was supported by King (1968) in her description of nursing care promoting new interpersonal relationships and entire changes in social relationships. These changing relationships, coupled with emotional involvement, individually influence perceptions. Perception, furthermore, is functionally selective and no one perceives everything in the internal or external environment. (Engel, et al., 1968; Krech & Crutchfield, 1948; Morgan & King, 1966; Tosi & Carroll, 1976). The functionally selective feature of perception could have influenced either the patients' or nurses' satisfaction, and thereby, perception of the quality of nursing care received or rendered.

In order to efficiently and effectively run a department of nursing, quality of nursing care must be a prime concern to nursing administrators. The results, however, of the present study do not reflect a low quality of nursing care, neither do the scores emphatically support a high quality of nursing care. Many authors agree that satisfaction is an outcome variable associated with quality of care (DeGeyndt, 1970; Donabedian, 1982; Polit & Hungler, 1978; Schulz & Johnson, 1976).

Cohen and Gadon (1978) found the compressed workweek resulted in employee fatigue, thereby leading to adverse effects on both the employer and employee. In the present study, the employer would be the patient while the employee the nurse. Adverse effects from fatigue could have effected perceptions of both and, in turn, the results of the questionnaire. Nursing administrators, therefore, should study all aspects of the compressed workweek to ensure the objective of quality nursing care. Evaluating patients' and registered nurses' perceptions of satisfaction and of quality nursing care is one way to satisfy this objective.

Recommendations for Future Studies

In view of the findings of the study and the dearth of studies conducted in hospitals to evaluate quality of nursing care as determined by perceived satisfaction in the context of a compressed workweek consisting of 12-hour days, further research is recommended. Replication of this study with a random and larger sample would allow a more powerful test of the hypotheses. These findings, therefore, could influence an administrator of nursing when deciding to institute compressed workweeks of 12-hour shifts.

The recommendation is made to conduct a cost analysis study of the 12-hour compressed workweek as compared to other shifts in similar institutions. Also recommended are studies concerning 12-hour shifts in nursing areas other than medical-surgical, and studies evaluating quality of care provided by team nurses and primary nurses. It is suggested that a replication of Vik and McKay's (1982) study be conducted to compare

the quality of care given by a 12-hour shift of nurses to a 10-hour shift and to an eight-hour shift of nurses.

Since factors such as age, education, work experience, or length of hospitalization could influence perception, samples should be more homogeneous. A categorization of patients according to length of hospitalization, age, or education would be appropriate. Nurses, likewise, should be grouped according to such variables as work experience, age, or education.

The recommendation is made for a longitudinal study of registered nurses' perceptions and patients' perceptions of quality nursing care. Also, a study related to cost analysis of quality nursing care before the facility converts to the compressed workweek of 12-hour shifts and after the compressed workweek has been established could show evidence of cost containment. To replicate this research in health care facilities other than privately-owned hospitals is highly recommended.

Finally, other types of research instruments should be used along with Risser's (1975) scale to precisely determine what factors, if any, are associated with high or low perception of quality nursing care. In respect to Risser's scale, subscales also could be compared to see if any one area is the primary reason for the total scale score. A concluding recommendation is the need of studies to develop reliable and valid instruments applicable to both nurses and patients.

REFERENCE NOTES

- Patients' Satisfaction with Nursing Care Scale. ...p<.00 (description) Reprinted exactly as figures appeared in article.
- Statement of Hospital Philosophy Basis. ... Hospital (hospital wherein data collected) Mimeographed. January 1, 1978.
- Statement of Hospital Philosophy concerning Patients. ... Hospital (hospital wherein data collected) Mimeographed. January 1, 1978.
- Definition of Nursing. ...Hospital (hospital wherein data collected) Mimeographed. October 1, 1979.
- Definition of Quality of Nursing Care. ...Department of Nursing (hospital wherein data collected) Mimeographed. October 1, 1979.
- Statement of who delivers Nursing Care. ... Hospital (hospital wherein data collected) Mimeographed. October 1, 1979.

BIBLIOGRAPHY

- Abdellah, F. G., & Levine, E. <u>Better patient care through nursing re</u>search (2nd ed.). New York: MacMillian, 1979.
- Allport, G. W., & Postman, L. <u>The psychology of rumor</u>. New York: Henry Holt, 1947.
- American Nurses' Association Commission on Nursing Services. <u>Standards</u> for nursing services. Kansas City, Mo.: American Nurses Association, 1973.
- Atwood, J. R., & Hinshaw, A. S. Multiple indicators of nurse and patient outcomes as a method for evaluating a change in staffing patterns. In M. V. Batey (Ed.). <u>Communicating nursing research</u>. Bolder: Western Inte state Commission for Higher Education, 1977.
- Bailit, H., Lewis, J., Hockheiser, L., & Bush, N. Assessing the quality of care. Nursing Outlook, 1975, 23(3), 153-159.
- Bennett, A. M., & Foster, P. C. Ernestine Wiedenbach. In J. B. George (Chairperson). <u>Nursing theories the base for professional nursing</u> <u>practice</u>. Englewood cliffs, N.J.: Prentice-Hall, 1982.
- Boskin, M. J. (Ed.). <u>The crisis in social security: Problems and</u> <u>prospects</u>. San Francisco: Institute for Contemporary Studies, 1981.
- Bullough, B. B. (Ed.). <u>The law and the expanding nursing role</u> (2nd ed.). New York: Appleton-Century-Crofts, 1980.
- Cales, A. D. A twelve-hour schedule experiment. <u>Supervisor Nurse</u>, 1976, <u>7</u>(6), 71-76.
- Chance, K. S. The quest for quality: An exploration of attempts to define and measure quality nursing care. <u>Image</u>, 1980, <u>12</u>(2), 41-45.
- Chang, B. L. Evaluation of health care professionals in facilitating self-care: Review of the literature and a conceptual model. <u>Advances in Nursing Science</u>, 1980, <u>3</u>(1), 43-58.
- Cleland, V., Smith, J., & McHugh, N. Inducements for nursing employment. Nursing Research, 1973, 22, 414-422.
- Cohen, A. R., & Gadon, H. <u>Alternative work schedules: Integrating in-</u> <u>dividual and organizational needs</u>. Reading, Mass.: Addison-Wesley, 1978.

Colt, A. M., & Corley, T. F. What nurses think of the 10-hour shifts. Hospitals, 1974, <u>48</u>(3), 134-142.

DeCosta, D. B. The 10-hour work schedule at Roger Williams General Hospital. In J. A. Wilson & W. C. Byham (Eds.). <u>The four-day</u> workweek: Fad or future? Pittsburgh: University of Pittsburgh, 1973.

- DeGeyndt, W. Five approaches for assessing the quality of care. Hospital Administration. Winter 1970, 15, 21-42.
- DeMarsh, K. G., & McLellan, E. I. The seven-day fortnight. <u>Canadian</u> Nurse, 1972, 68, 37-38.
- The demise of the traditional 5-40 workweek? <u>American Journal of Nurs-</u> <u>ing</u>, 1981, <u>81</u>, 1138-1141.
- Donabedian, A. Evaluating the quality of medical care. <u>Milbank</u> <u>Memorial Fund Quarterly</u>, 1966, 44(3, Pt. 2), 166-203.
- Donabedian, A. <u>A guide to medical care administration</u> (Vol. 2). New York: American Public Health Association, 1969.
- Donabedian, A. <u>Explorations in quality assessment and monitoring</u> (Vol. 1). Ann Arbor: Health Administration Press, 1980.
- Donabedian, A. <u>Explorations in quality assessment and monitoring</u> (Vol. 2). Ann Arbor: Health Administration Press, 1982.
- Donovan, L. Is there a 7-day workweek in your future? <u>RN</u>, 1978, <u>41</u>(3), 63-67.
- Eaton, P., & Gottselig, S. Effects of longer hours, shorter week for intensive care nurses. <u>Dimensions in Health Service</u>, 1980, <u>57(8)</u>, 25-27.
- Engel, J. F., Kollat, D. T., & Blackwell, R. D. <u>Consumer behavior</u>. New York: Holt, Rinehart, & Winston, 1968.
- Ganong, W. L., Ganong, J. M., & Harrison, E. T. The 12-hour shift: Better quality, lower cost. Journal of Nursing Administration, 1976, 6(2), 17-29.
- Gonnella, J., Louis, D., & McCord, J. The staging concept--An approach to the assessment of outcome of ambulatory care. <u>Medical Care</u>, 1976, 14(1), 13-21.
- Graham, N. A quality care assessment: Pediatricians and pediatric nurse practitioners. <u>Image</u>, 1978, <u>10</u>(2), 41-48.

Gunderson, M. Labour market economics. New York: McGraw-Hill Ryerson, 1980.

- Hatfield, B. P. Beyond the standard shift: Staffing geared for today. <u>Health Services Manager</u>, 1981, <u>14</u>(6), 3-4. (a)
- Hatfield, B. P. Solve the nursing shortage with your available resources: <u>Hospital Topics</u>, 1981, 59(6), 4-8. (b)
- Hegyvary, S. T., & Haussman, R. K. D. Correlates of the quality of nursing care. <u>Journal of Nursing Administration</u>, 1976, <u>6</u>(9), 22-27. (a)
- Hegyvary, S. T., & Haussman, R. K. D. Monitoring nursing care quality. Journal of Nursing Administration, 1976, 6(9), 3-9. (b)
- Hinshaw, A. S., & Atwood, J. R. A patient satisfaction instrument: Precision by replication. Nursing Research, 1982, 31, 170-176.
- Houston, C. A., & Pasanen, W. E. Patients' perceptions of hospital care. <u>Hospitals</u>, 1972, <u>46</u>, 70-74.
- Jelinek, R. C. <u>Å review and evaluation of nursing productivity</u> (Publiccation No. (HRA) 77-15). Bethesda, Md.: U.S. Department of Health, Education, and Welfare, 1976.
- Joint Commission on Accreditation of Hospitals. <u>Accreditation manual</u> for hospitals, 1983 edition. Chicago: Author, 1982.
- Katz, D., & Kahn, R. <u>The social psychology of organizations</u> (2nd ed.). New York: Wiley, 1978.
- King, I. M. A conceptual frame of reference for nursing. <u>Nursing</u> <u>Research</u>, 1968, <u>17</u>(1), 27-31.
- King, I. M. <u>Toward a theory in nursing: General concepts of human</u> behavior. New York: Wiley, 1971.
- Kirchhoff, K. T. Let's ask the patient: Consumer input can improve patient care. <u>Journal of Nursing Administration</u>, 1976, <u>6</u>(10), 36-40.
- Krech, D., & Crutchfield, R. S. <u>Theory and problems of social psychology</u>. New York: McGraw-Hill, 1948.
- Krech, D., Crutchfield, R. S., & Ballachey, E. L. <u>Individual in society</u>. New York: McGraw-Hill, 1962.

Larsen, C. A four-day week for nurses. <u>Nursing Outlook</u>, 1973, <u>21</u>, 650-651.
Leke, J. T. Nigerian patients' perception of their nursing care needs. Journal of Advanced Nursing, 1978, 3, 181-187.

Mann, F. C. Shift work and the shorter workweek. In C. E. Danker, F. C. Mann, & H. R. Northrup (Eds.), <u>Hours of work</u>. New York: Harper & Row, 1965.

- Marshall, R. The influence of legislation on hours. In C. E. Dankert, F. C. Mann, & H. R. Northrup (Eds.), <u>Hours of work</u>. New York: Harper & Row, 1965.
- Miller, J. Innovations in working patterns. Washington, D.C.: Communications Workers of America and German Marshall Fund of the United States, 1978.
- Moore, D. S., & Cook-Hubbard, K. Comparison of methods for evaluating patient response to nursing care. <u>Nursing Research</u>, 1975, <u>24</u>, 202-204.
- Morgan, C. T., & King, R. A. <u>Introduction to psychology</u> (3rd ed.). New York: McGraw-Hill, 1966.
- National Industrial Conference Board. <u>The five-day week in manufacturing</u> <u>industries</u>. New York: Author, 1929.
- Nie, M. H., Hull, C. H., Jenkins, J. G., Steinbrenner, K., & Bent, D. H. <u>SPSS: Statistical package for the social sciences</u>. New York: <u>McGraw-Hill</u>, 1975.
- Nollen, S. D., & Martin, V. H. <u>Alternative work schedules</u>, parts 2 and 3. New York: American Management Association, 1978.
- Polit, D., & Hungler, B. <u>Nursing research: Principles and methods</u>. Philadelphia: Lippincott, 1978.
- Poor, R. Reporting a revolution in work and leisure: 27 4-day firms. In R. Poor (Ed.), <u>4 Days 40 hours</u>. New York: Mentor, 1973.
- Price, E. M. Seven days on and seven off. <u>American Journal of Nursing</u>, 1981, <u>81</u>, 1142-1143.
- Risser, N. L. Development of an instrument to measure patient satisfaction with nurses and nursing care in primary care settings. <u>Nurs-</u> <u>ing Research</u>, 1975, <u>24</u>, 45-52.
- Robinson, B. A study of consumer perceptions related to nursing. <u>Nursing Leadership</u>, 1978, <u>1</u>(1), 14-18.
- Ronen, S., & Primps, S. B. The compressed workweek as organizational change: Behavioral and attitudinal outcomes. <u>Academy of Manage-</u> ment Review, 1981, 6(1), 61-74.

Rowan, R. L. The influence of collective bargaining on hours. In C. E. Dankert, F. C. Mann, & H. R. Northrup (Eds.), <u>Hours of work</u>. New York: Harper & Row, 1965.

- Ruch, F. L. <u>Psychology and life</u> (6th ed.). Chicago: Scott, Foresman, 1963.
- Ryan, S. M. The modified workweek for nursing staff on two pediatric units. <u>Journal of Nursing Administration</u>, 1975, <u>5</u>(4), 31-34.
- Safford, B. J., & Schlotfeldt, R. M. Nursing service staffing and quality of nursing care. Nursing Research, 1960, 9, 149-154.

Sellars, T. V. The 4/40 does it raise personnel cost? <u>Hospitals</u>, 1973, <u>47</u>, 94-101.

- Shaw, P. The 10-hour day in the 4-day week. <u>Supervisor Nurse</u>, 1978, 9(9), 47-56.
- Schulz, R., & Johnson, A. C. <u>Management of hospitals</u>. New York: McGraw-Hill, 1976.
- Sleeper, R. The consumer looks at nursing. In The E. A. Fagen Health Care Lecture Series 1970-1975, <u>Issues in health care</u>. New York: National League for Nursing, 1976, (Publication No. 14-1599).
- Sloan, F. A., & Elnicki, R. A. Nurse staffing in hospitals: A microeconometric analysis. Industrial Relations, 1980, <u>19(1)</u>, 15-33.
- Stufflebeam, D. L. (Ed.). <u>Educational evaluation and decision making</u>. Itasca, Il.: Peacock, 1971.
- Szilagyi, A. D., & Wallace, M. J. <u>Organizational behavior and per-</u> formance. Santa Monica: Goodyear, 1980.
- Tosi, H. L., & Carroll, S. J. <u>Management: Contingencies, structure,</u> and process. Chicago: St. Clair Press, 1976.
- Ventura, M. R., Fox, R. N., Corley, M. C., & Mercurio, S. M. A patient satisfaction measure as a criterion to evaluate primary nursing. <u>Nursing Research</u>, 1982, <u>31</u>, 226-230.
- Vik, A. G., & MacKay, R. C. How does the 12-hour shift affect patient care? <u>Journal of Nursing Administration</u>, 1982, <u>12</u>(1), 11-14.
- Walters, C. G., & Paul, G. W. <u>Consumer behavior an integrated framework</u>. Homewood, Il.: Irwin, 1970.

Wandelt, M. A., & Ager, J. W. <u>Quality patient care scale</u>. New York: Appleton-Century-Crofts, 1974. Weiss, R. E., Sauer, J. E. Jr., & Sobiech, G. There's no nurse shortage at Saint Joseph Medical Center. <u>Health Service Manager</u>, 1981, <u>14</u>(12), 3-6.

Weiss, R. E., Sobiech, G., & Sauer, J. E. Jr. Innovative plan solves nurse shortage problem. <u>Hospitals</u>, 1981, <u>55</u>(6), 78-84.

Yura, H., & Walsh, M. B. <u>The nursing process</u> (2nd ed.). New York: Appleton-Century-Crofts, 1973.

Zimmer, M. J. A model for evaluating nursing care. <u>Hospitals</u>, 1974, <u>48</u>, 91-131.

APPENDIX A

.

. .

HUMAN SUBJECTS REVIEW COMMITTEE

APPROVAL LETTER

THE UNIVERSITY OF NORTH CAROLINA AT GREENSBORO



School of Nursing Masters Program

November 29, 1982

Ms. Linda Van Vechten 3208 Sparger Road Durham, North Carolina 27705

Dear Ms. Van Vechten:

Your research project was reviewed by the Human Subjects Review Committee on November 24, 1982. The Committee has determined to its satisfaction that the human subjects in this activity will not be placed at risk. We would like to take this opportunity to extend to you our congratulations and wishes for a successful research endeavor. We would like also to remind you that we must review and approve any changes which you make in your protocol affecting risk to human subjects.

Sincerely yours,

Margaret V. Harget

Margaret V. Hargett, R.N., Ph.D. Chairman Human Subjects Review Committee

MVH: bb

GREENSBORO, NORTH CAROLINA/27412

THE UNIVERSITY OF NORTH CAROLINA is composed of the sixteen public senior institutions in North Caroline

an equal opportunity employer

APPENDIX B

. .

- - --

.

AGENCY CONSENT FORM

-

THE UNIVERSITY OF NORTH CAROLINA AT GREENSBORO



School of Nursing Masters Program

STATEMENT OF AGENCY INFORMED CONSENT

To insure the protection of human rights, federal regulations require that participants in research studies verify a statement indicating that their participation is voluntary. Therefore, to comply with these regulations, please read the following statements and then sign your name, title, and date in the spaces provided.

I understand that Miss Linda A. Van Vechten R.N., student in the Master of Science in Nursing program at the University of North Carolina at Greensboro, is conducting a research study to determine if there is a relationship between how nurses perceive the quality of nursing care they administer on a 12-hour shift schedule and how the patients perceive the quality of nursing care they receive from registered nurses working on 12-hour shift schedules.

Adult patients between the age of 18 to 65, who are hospitalized on the medical-surgical units, and all registered nurses assigned to the same units will be invited to participate in the study. The patients and the nurses will be giving implied consent by completing and returning the questionnaire. It will be explained to the patients and the nurses that participation in the study is voluntary. Their identities will not be revealed, and they may withdraw from the study at any time until the completed questionnaire has been submitted. The patients will also be informed that participation or non-participation will not affect the care they receive. The nurses will be told that participation or non-participation will not affect their employment.

The study will be conducted by administering a questionnaire and a demographic data information sheet to the patients and nurses. The questionnaire will take approximately 10 minutes to complete. The patients will place the completed or non-completed questionnaire in the white envelope provided by the researcher who will return in about 30 to 60 minutes after distribution to collect them. The nurses may complete the questionnaire at a convenient time during the 12-hour shift or immediately following and place the questionnaire in the white envelope provided by the researcher. After sealing the envelope, the nurses will drop it into a box provided by the researcher and located in a designated spot in the nurses station.

GREENSBORO, NORTH CAROLINA/27412

THE UNIVERSITY OF NORTH CAROLINA is composed of the sistern public senior institutions in North Corolina

an equal opportunity employer

I understand data collection will start on approximately January 3, 1983. The participating agency will provide the names of the registered nurses working on the medical-surgical units, the patients' records so that the patients' age may be attained, and a space for a collection receptacle in the nurses' station on each participating nursing unit. The assistant director of the nursing service in the hospital will work with the researcher to determine which patients the researcher will approach and will allow the researcher to obtain the age of the patients from the records.

I acknowledge that the research study has been explained to me, and hereby grant permission for the researcher to contact appropriate subjects to request their voluntary participation in the study. I also understand that all responses will be analyzed as group data, that the results of the study may be published and that the identity of the individual subjects and the agency will not be revealed at anytime.

12-20-82

DATE

WITNESS

SIGNATURE

Executive Director

TITLE

APPENDIX C

CONFIRMATION LETTER TO AGENCY

THE UNIVERSITY OF NORTH CAROLINA AT GREENSBORO



School of Nursing Masters Program

January 3, 1982

Dear

This communication is to confirm your willingness to permit dat. collection at your institution for a research study being conducted by Ms. Linda Van Vechten. This study is being conducted in partial fulfillment of the requirements for the Master of Science in Nursing Degree.

It is understood that this study is approved by the graduate faculty of the School of Nursing, The University of North Carolina at Greensboro; further, the confidentiality of all data so obtained is assured by this faculty.

We are deeply grateful to you and the members of your staff for your interest and support.

Sincerely,

Elaine R. Lewis

Eloise R. Lewis, Ed.D., F.A.A.N. Professor and Dean

ERL:bb

cc: R. Barnes, Chairman

GREENSBORO, NORTH CAROLINA/27412

THE UNIVERSITY OF NORTH CAROLINA is composed of the sixteen public senior institutions in North Carolina

an equal opportunity employer

LETTER REQUESTING CONSENT TO USE INSTRUMENT

APPENDIX D

. .

3208 Sparger Road Durham, N.C. 27705 24 October 1982

Ms. Nancy L. Risser 9036 - 22nd Avenue N.W. Seattle, Washington 98117

Dear Ms. Risser:

I am a graduate nursing student at The University of North Carolina at Greensboro, and am writing a thesis on the quality of nursing care and nurses' flexitime schedules such as the 10 hour and 12 hour shifts.

To determine the quality of care as preceived by the patient, I will be measuring the patients' satisfaction with their nursing care. For use with inpatients, your instrument, RISSER PATIENT SATISFACTION SCALE, is perfect except for the question, "The nurse gives good advice over the telephone." In the May/June 1982 issue of <u>Nursing Research</u>, Hinshaw and Atwood describe a revised form of your instrument which would be applicable to my study.

I would appreciate permission to use either of the described instruments. Additionally, I would appreciate any information you can send me on either the original or any updated instruments concerning scoring, reliability, and validity.

I would like to have my initial plan and instrument ready for my thesis committee to review by early November, so would very much like to receive your response by 13 November. I certainly appreciate your taking the time to read my letter and am very hopeful of receiving a reply from you.

Sincerely. nda H. Man Vechter

Linda A. Van Vechten, R.N.

APPENDIX E

CONSENT TO USE RISSER'S PATIENT

SATISFACTION SCALE

9036 22nd Ave. NW Seattle, Wa 98117 November 19, 1982

Linda A. Van Vechten 3208 Sparger Road Durham, N.C. 27705

Dear Ms. Van Vechten:

You are welcome to use my patient saisfaction scale in your research. I have not copyrighted the instrument. Since I developed the tool, I have done no further refinement so am unable to furnish you additional information on its reliability and validity. You mention Hinshaw and Atwood's recent article in <u>Nursing Research</u>. You have probably also seen Ventura's study in an inpatient population in the same magazine this year.

Scoring information you need is found in either my original <u>Nursing Research</u> article or in Volume 2 of <u>Instruments for Measuring Nursing Practice and</u> <u>Other Health Care Variables</u> (DHEW PHS HRA 78-54).

You must be aware that my tool was developed in an ambulatory care setting. There may be other area of inpatient attitude toward nurse (satisfaction) that are untapped in my tool such as physical care and comfort measures.

I wish you success in your study. I would appreciate it if you would mail me an abstract of your completed study to the above address.

Sincerely,

Mancy & Kenne

Nancy L. Risser C.RN, M.N., ANP

APPENDIX F

· .

PATIENTS SATISFACTION QUESTIONNAIRE

PATIENTS SATISFACTION QUESTIONNAIRE

This study has two parts and has no right or wrong answers. I am looking at how you as a patient perceive the nursing care you receive. Please read the directions before preceding with each part.

PART I: PATIENT'S PERCEPTION OF NURSING CARE

Circle the number under the word which best describes your perception of your nursing care. PLEASE BE SURE TO MARK EVERY STATEMENT.

| | | STRONGLY AGREE | AGREE | NEUTRAL | DISAGREE | STRONGLY DISAGREE |
|----|---|-------------------|-------|---------|----------|----------------------|
| 1. | The nurses usually assist the doctor with procedures. | 1 | 2 | 3 | 4 | 5 |
| 2. | The nurses take time to listen to my problems. | 1 | 2 | 3 | 4 | 5 |
| 3. | The nurses always tell me what effects to expect from my drugs. | 1 | 2 | 3 | 4 | 5 |
| 4. | The nurses explain procedures to me in simple language. | 1 | 2 | 3 | 4 | 5 |
| 5. | The nurses should be more attentive to my needs than they are. | 1 | 2 | 3 | 4 . | 5 |
| 6. | The nurses are just not patient enough. | 1 | 2 | 3 | 4 | 5 |
| 7. | The nurses do not take enough time to be complete in their work. | 1 | 2 | 3 | 4 | 5 |
| 8. | When I need to talk to someone, I can go to an nurse with my problem. | | 2 | 3 | 4 | 5 |

J.

75

T

Page - 2: PATIENTS SATISFACTION QUESTIONNAIRE

. .

| | | STRONGLY AGREE | AGREE | NEUTRAL | DISAGREE | STRONGLY |
|-----|---|-------------------|-------|---------|----------|----------|
| 9. | The nurses are too busy at the desk to spend time talking with me. | 1 | 2 | 3 | 4 | 5 |
| 10. | The nurses make it a point to show me how to carry out the doctor's orders. | 1 | 2 | 3 | 4 | 5 |
| 11. | The nurses are too slow to do the little or special things for me. | 1 | 2 | 3 | 4 | 5 |
| 12. | The nurses are pleasant to be around. | 1 | 2 | 3 | 4 | . 5 |
| 13. | The nurses do not make sure that I know how and when to take my medications. | 1 · | 2 | 3 | 4 | 5 |
| 14. | The nurses are often to disorganized to appear calm. | 0 | 2 | 3 | 4 | 5 |
| 15. | The nurses always give complete explanations to me of why tests are ordered. | 1 | 2 | 3 | 4 | 5 |
| 16. | The nurses give direc- tions to me about my nursing care too fast. | 1 | 2 | 3 | 4 | 5 |
| 17. | The nurses give me good advice about my nursing cara. | 1 | 2 | 3 | 4 | 5 |
| 18. | I feel free to ask the nurse any questions I have. | 1 | 2 | 3 | 4 | 5 |
| 19. | Just talking to the nurses makes me fæel better. | 1 | 2 | 3 | . 4 | 5 |

y

Page - 3: PATIENTS SATISFACTION QUESTIONNAIRE

| | | STRONGLY AGREE | AGREE | NEUTRAL | DISAGREE | STRONGLY DISAGREE |
|------------|---|-------------------|-------|---------|----------|----------------------|
| 20. | I am satisfied with the nursing care I receive from the nurses. | 1 | 2 | 3 | 4 | 5 |
| 21. | I feel I receive high quality nursing care from the nurses. | 1 | 2 | 3 | 4 | 5 |

PART II: DEMOGRAPHIC DATA

To assist me in the study, please answer each question by placing a check mark in the appropriate box or by filling in the blank.

2. Female

2. White 🔲

1. SEX:

| 1. | Male | |
|----|------|--|
| | | |

2. ETHNIC GROUP:

| 1. | Black | |
|----|-------|--|
| 3. | Other | |

3. 38 - 47 🔲

3. AGE:

| 1. | 18 - 27 | 4. | 48 - 57 | |
|----|---------|----|---------|--|
| 2. | 28 - 37 | 5. | 58 - 67 | |

77

Page - 4: PATIENTS SATISFACTION QUESTIONNAIRE

4. EDUCATION:

. . . .

Please check the highest level obtained.

- 1. Grade School
- 2. High School

3. Technical School

4. Junior or Community College

- 5. Baccalaureate
- 6. Masters
- 7. Doctorate
- 8. Other _____

5. HOSPITAL STAY:

How long have you been in the hospital this time?

| 1. | Less than one day 🔲 |
|----|----------------------|
| 2. | One to three days 🔲 |
| 3. | Four to seven days 🗌 |
| 4. | Over seven days |

APPENDIX G

REGISTERED NURSES SATISFACTION

QUESTIONNAIRE

REGISTERED NURSES SATISFACTION QUESTIONNAIRE

This study has two parts and has no right or wrong answers. I am looking at how you as a registered nurse perceive the nursing care you give. Please read the directions before preceding with each part.

PART I: NURSE'S PERCEPTION OF NURSING CARE

Circle the number under the word which best describes your perception of your nursing care. PLEASE BE SURE TO MARK EVERY STATEMENT.

| | STRONGLY AGREE | AGREE | NEUTRAL | DISAGREE | STRONGLY DISAGREE |
|--|-------------------|-------|---------|----------|----------------------|
| I usually assist the doctor with procedures. | 1 | 2 | 3 | 4 | 5 |
| I take time to listen to patients' problems. | 1 | 2 | 3 | . 4 | 5 |
| I always tell my patients what effects to expect from their drugs. | | 2 | 3 | 4 | 5 |
| I explain procedures to the patients in simple language. | 1 | 2 | 3 | 4 | 5 |
| 5. I should be more atten- tive to the patients' needs than I am. | 1 | 2 | 3 | 4 | 5 |
| S. I am just not patient enough. | 1 | 2 | 3 | 4 | 5 |
| I do not take enough time to be complete in my work. | 1 | 2 | 3 | 4 | 5 |
| 8. When patients need to talk to someone, they can come to me with their problems. | 1 | 2 | 3 | 4 | 5 |

| • | Υ. | | - | | | |
|-----------|--|-------------------|-------|---------|----------|----------------------|
| | | STRONGLY AGREE | AGREE | NEUTRAL | DISAGREE | STRONGLY DISAGREE |
| 9. | I am too busy at the desk to spend time talking to patients. | 1 | 2 | 3 | 4 | 5 |
| 10. .' | I make a point in showing patients how to carry out the doctor's orders. | 1 | 2 | 3 | 4 | 5 |
| 11. | I am too slow to do the little or special things for my patients. | 1 | 2 | 3 | 4 | 5 |
| 12. | I am pleasant to be around. | 1 | 2 | 3 | 4 | 5 |
| 13. | I do not make sure that patients know how and when to take their medications. | 1 | 2 | 3 | 4 | 5 |
| 14. | I am often too disorganized to appear calm. | 1 | 2 | 3 | 4 | 5 |
| 15. | I always give complete explanations to the patients of why tests are ordered. | 1 | 2 | 3 | 4 | 5 |
| 16. | I give directions about nursing care too fast. | 1 | 2 | 3 | 4 | 5 |
| 17. | I give good advice to the patients about their nursing care. | 1 | 2 | 3 | 4 | 5 |
| 18. | Patients feel free to ask me any questions they have. | 1 | 2 | 3 | 4 | 5 |
| 19. | Just talking to me makes some patients feel better. | 1 | 2 | 3 | 4 | 5 |

Ċ.,

Page - 2: REGISTERED NURRSES SATISFACTION QUESTIONNAIRE

| | | | STRONGLY AGREE | AGREE | NEUTRAL | DISAGREE | STRONGLY DISAGREE |
|-----|----------------------|---------------------------------------|--------------------------|------------------|-----------|---------------------------|----------------------|
| 20. | | isfied with the care I give | 1 | 2 | 3 | 4 | 5 |
| 21. | quality | give high nursing care atients. | 1 | 2 | 3 | 4 | 5 |
| | •. | PAR | FII: DE | Mograpi | HIC DATA | | |
| ch | To assis eck mark | st me in the stu in the appropria | dy, please ate box or | answer by fil | each que | estion by p the blank. | placing a |
| • | SEX: | • | | | | | |
| | 1. | Male 🔲 | | 2. | Female [| | |
| 2. | ETHNIC G | ROUP: | | | | | |
| | 1. | Black | | 2. | White |] | |
| | 3. | Other | | | | | |
| 3. | AGE: | | | | | | |
| | 1. | 18 - 27 | | 4. | 48 - 57 | | |
| | 2. | 28 - 37 🔲 | | 5. | 58 - 67 | | |
| | 3. | 38 - 47 🔲 | | | | | |
| | EDUCATIO | N: | | | | | |
| ١. | Please c | heck the highest | : degree y | ou hold | in nursi | ng. | |
| ١. | | Diploma | | 4. | Masters | | |
| ·. | 1. | | | | | | |
| • | 1. | Associate | | 5. | Doctorate | | |
| ι. | 1. 2. | | | 5. | Doctorate | | |
| | 1. 2. | Associate | | 5. | Doctorate | ' | |

.

| + | 1. years months |
|------------|---|
| 11. | (If you do not work this shift, please place a β in the blank.) How long have you worked 12-hour shifts? |
| | 1yearsmonths |
| 10. | How long have you worked six-hour shifts? |
| | 1. Yes 2. No |
| | Have you ever worked 10-hour shifts after receiving your RN Degree? |
| 9. | PAST TEN-HOUR WORK: |
| | Have you ever worked eight-hour shifts after receiving your R.N. Degree? |
| 8. | PAST EIGHT-HOUR WORK: |
| _ | 2. 12-hour shifts |
| | 1. f-hour shifts |
| | Check the one you usually work |
| 7. | SHIFTS: |
| | 3. Rotating |
| | 2. Nights |
| | 1. Days |
| | (Days = 7AM - 7PM Nights = 7PM - 7AM) |
| 7 • | HOURS: • Check the one you usually work. |
| 6. | 3. Pool |
| | 2. Permanent part-time |
| | 1. Permanent full-time |
| | Check the one which is most appropriate. |
| 5. | JOB: |
| Pag | e - 4: REGISTERED NURRSES SATISFACTION QUESTIONNAIRE 83 |

APPENDIX H VERBAL INTRODUCTORY STATEMENT TO THE STAFF NURSE

•

.

THE UNIVERSITY OF NORTH CAROLINA At greensbord



School of Nursing Masters Program

VERBAL INTRODUCTORY STATEMENT TO THE STAFF NURSE

I'm Linda A. Van Vechten, a registered nurse and a student in the Master of Science in Nursing program at the University of North Carolina in Greensboro. I'm not a member of the nursing staff of this agency. Permission has been obtained from the administration of your nursing department and hospital to contact the staff and ask you to participate in a study I am doing to determine if there is a relationship between how nurses perceive the quality of nursing care they administer and how the patients perceive the quality of nursing care received.

The total population of staff nurses from the medical-surgical units at this medical facility are being asked to participate in the study. Your participation must be voluntary. You may, however, withdraw from the study without prejudice or duress at any time until you have completed and returned the questionnaire. Participation or nonparticipation will not affect your employment in any way. The statements on the survey questionnaire have no right or wrong answers, and each item should be answered. There are no anticipated benefits, discomforts, or risks associated with participation in the study. The questionnaire requires approximately 10 minutes to complete.

If you decide to participate or not to participate, place the questionnaire inside the attached envelope, seal it, and drop it into the marked receptacle in the nurses station on the unit. The envelope may also be submitted to the researcher the next time she is on the unit. You may complete the questionnaire at a convenient time to you, either on this tour of duty or immediately following.

The data will be used in a thesis as partial fulfillment of the Master of Science degree and may be published in the future. The results of the study will be available in the future. The results of the study will be available in the bound thesis in Jackson Library after September 1983. Your name and the name of the hospital and its location are omitted from the questionnaire. All data will be analyzed as group data so that anonymity will be observed. Confidentiality will be maintained.

Completion and return of the attached questionnaire will signify your consent to participate. Thank you for your valuable time and willingness to take part in the study.

GREENSBORO, NORTH CAROLINA/27412

THE UNIVERSITY OF NORTH CAROLINA is composed of the sixteen public senior institutions in North Carolina

an equal opportunity employer





APPENDIX I

VERBAL INTRODUCTORY STATEMENT

TO THE PATIENT

THE UNIVERSITY OF NORTH CAROLINA AT GREENSBORO



School of Nursing Masters Program

VERBAL INTRODUCTORY STATEMENT TO THE PATIENT

I'm Linda A. Van Vechten, a registered nurse and a student in the Master of Science in Nursing program at the University of North Carolina at Greensboro. I'm not a member of the nursing staff of this agency. I have permission from hospital administration to approach you and ask you to participate in a study I am doing to determine if there is a relationship between how registered nurses perceive the quality of nursing care they administer and how the patients perceive the quality of nursing care received.

To do this, I would appreciate it if you took about 10 minutes of your time to answer a brief questionnaire. Each item should be answered.

Your participation is voluntary, and your identity will not be revealed; you may withdraw from the study without prejudice or duress anytime up until the questionnaire is completed and submitted to me. Participation or non-participation will not affect your care in any way. The nursing staff will not have access to your responses. Confidentiality will be maintained. There are no anticipated benefits, discomforts or risks associated with participation in the study.

The data will be used in a thesis as partial fulfillment of the Master of Science degree and may be published in the future. The results of the study will be available in the bound thesis section in Jackson Library, University of North Carolina at Greensboro after September 1983.

I do appreciate your allowing me to explain the study to you. If you have any questions concerning the questionnaire or your participation, I will be happy to answer them. If you decide to participate, place the completed questionnaire inside the attached envelope, seal it, and I will return in about 30 to 60 minutes to pick it up. If you decide not to participate in the study, you may seal the blank questionnaire in the envelope and return it to me when I come back.

Completion and return of the attached questionnaire will signify your consent to participate. Thank you for your time.

GREENSBORO, NORTH CAROLINA/27412

THE UNIVERSITY OF NORTH CAROLINA is composed of the sisteen public senior institutions in North Carolina

an equal opportunity employer

