

AN ANALYSIS OF THE ACTIVITIES OF THREE  
STUDENT NURSES IN A SELECTED  
NEWBORN UNIT

by

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m.h.s.

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CHAPTER I  
INTRODUCTION

Background of the Problem

Over the past half-century, trends have been established which seem to indicate that a growing demand for nursing service during the next few decades is inevitable. The population is expected to increase by an unprecedented measure. More people are expected to live to an older age, falling heirs to the degenerative diseases of longevity. Medical practice is expected to broaden even further in scope with progressively more precise methods of diagnosis and treatment. Public health and community service are expected to expand. Society seems to be demanding more of the benefits of a growing knowledge of health and medical science as people become increasingly aware of these benefits. (18)

If these trends continue as expected, it is obvious that more nursing personnel of all types will be needed for staffing the hospitals, doctors' offices, public health agencies, nursing education institutions, and for providing home care of the ill and injured. Three possibilities suggest themselves as measures for helping to meet this increasing demand by society for more nursing service.

First, nursing must be made more attractive to prospective students who qualify for any of the various kinds of nursing education programs and thereby enlist more than the present rate of 4 per cent of the college age population. Second, prevalent barriers to professional nursing education (e.g., age, sex, nationality, religion, marital status, and the like) must be eliminated to open opportunity for more students.<sup>(18)</sup> Third, once these women and men have embarked upon a program of study in nursing, all reasonable efforts should be exerted to maintain the students' interest and motivation in nursing and thereby reduce the attrition rate from the present 33 per cent.<sup>(3)</sup>

The future of nursing would seem to depend upon the ability of teachers in every nursing field to analyze critically long-accepted practices and beliefs; to reject those which seem out-moded; and to test others, not in relation to some pre-determined and inflexible standard or to opinions of leaders in the field, but through carefully planned research which is related to the needs and problems of a rapidly changing society.<sup>(17)</sup> Resources in the field of nursing are being estimated, systems of education are being reviewed, and the possibilities of new developments in nursing service and nursing education are being explored.<sup>(4)</sup> Attention must be paid to findings of educational research concerning ways in which nursing can

be best taught and the effect these findings will have on the philosophy of the school and its objectives. (19)

Analyses of nursing students' activities in the clinical practice areas would seem to be of value in establishing one basis from which to evaluate a program of nursing education in light of the objectives of that program. Through an actual analysis of how the students' time is allocated to the performance of different kinds of activities while carrying out a clinical practice assignment, direction may be indicated for perpetuation, modification, or further development of the educational program in nursing.

#### Statement of the Problem

It is the purpose of this study to determine the nature of the activities performed by the nursing student while assigned for clinical practice in the newborn nursery.

#### Limitations

The problem will be limited to observation of three nursing students in one newborn nursery, a part of the clinical practice of the basic program of one collegiate school of nursing. Observation will be limited to the equivalent of one entire student experience in this clinical area, that is, approximately 90 hours of practice. The



problem will be restricted to an activity analysis; no attempt will be made to evaluate these activities.

#### Assumptions

It is assumed that the newborn infant census in the selected nursery will be fairly typical for the duration of this study. It is also assumed that the practice of the three nursing students observed will be typical of the practice of other nursing students undergoing clinical experience in a newborn nursery.

#### Justification

Insofar as evaluation of the curriculum should be a planned and on-going part of curriculum development, an analysis of the nursing student's activities in the clinical nursing laboratory would seem to be of some value for curriculum development. It is recognized that the circumscribed nature of this study gives one cause to ponder the possible significance of the findings. In defense, it may be stated that this sampling constitutes a relatively new approach to curriculum appraisal. Any real merit in the findings would evolve only as other investigations of like nature are conducted in the various areas of clinical nursing and in a variety of nursing schools to permit a more exemplary view of students'

activities in clinical practice laboratories.

### Plan of the Study

The plan of the study may be described in a series of steps:

1. Tentatively select the site and subjects from which to collect the data for the analysis.
2. Explain the purpose and the design of the study to the directors of nursing service and nursing education, the clinical instructors, the head nurse and her assistant; secure their permission to make the study.
3. Procure the hour schedules of the nursing students assigned to the selected clinical area and determine a typical hour pattern of clinical practice for the duration of the students' assignment to the selected clinical area.
4. Decide upon the distribution of observations among the students selected as subjects for purposes of this study.
5. Devise a form for recording the observations.
6. Become familiarized with the physical environment of the selected clinical area and clarify any policies or procedures foreign to the observer's experience.

7. Gain skill in observation of students' activities in the selected clinical area, in the translation of these observations into functional units of nursing, and in recording said observations on the devised record form.
8. Explain the study to the subjects and secure their cooperation.
9. Make continuous, timed observations of the students' activities in the selected clinical area; record activities on the prepared form.
10. Obtain census records of the clinical area for the preceding year and compare with the census which exists during the observations made for purposes of this study.
11. Tentatively analyze samples of the data and derive trial categories.
12. Further delimit and precisely define the categories.
13. Assign each observed activity to the appropriate category.
14. Compute the total time expended on activities assigned to each of the defined categories and translate these totals into percentages of the grand total of time allotted to the student for clinical practice in the selected clinical area.

15. Depict the data in graphic form.

#### Definition of Terms

For the sake of clarity some terms have been defined in an attempt to convey the connotations implied in their use in this study.

Clinical practice area, or clinical nursing laboratory, may be defined, for purposes of this study, as a unit or division of an institution or agency where nursing students carry out, under supervision, assignments in the actual care of patients.

The newborn nursery, selected as the clinical practice area for purposes of this study, is that unit where care is provided for newborn infants directly upon their delivery and usually until the infants are about five days of age. Generally these infants are "well-babies," although occasionally infants with mild disorders are admitted for care in this clinical unit.

The basic professional program in a collegiate school of nursing involved in this study consists of four calendar years of study and practice designed at the college level of instruction.

A functional unit of nursing may be defined as a total task which has an identifiable purpose, as contrasted to separate physical motions.

### Presentation of the Study

This report will be organized into four chapters. Chapter I, Introduction, indicates the relation of this study to the developing stream of educational thinking regarding the present and anticipated demands for nursing service, and outlines the problem, the purpose of this study, and the proposed plan of procedure. Chapter II, Review of the Literature, will present a review of related literature and significant studies. Chapter III, Design of the Study, is devoted to an explanation of the procedures involved in executing the study and to a presentation of the findings. Chapter IV, Summary, Conclusions and Recommendations, will provide a summary of the study with conclusions and recommendations based on the data obtained.

## CHAPTER II

### REVIEW OF THE LITERATURE

During the past half-century, as research workers and practical administrators have learned that it is possible to analyze some of the more complex, elusive elements in human behavior and to set these forth specifically, nursing has sought to employ the device of activity or job analysis in examining itself. The problem under consideration here is twofold: How has the technique of activity analysis been utilized in nursing, and what have been the objectives of these studies?

First, what is activity or job analysis? It is a specialized form of ascertaining the component activities involved in life at large.<sup>(9)</sup> To elaborate, job analysis is a method used to discover the component elements of a job through observation, study, and recording pertinent information relating to the nature of a specific job.<sup>(15)</sup>

Studies of the content of jobs have been made in four different ways:

1. ~~Fack~~by analyzing the concept of the job in terms of large functions, based primarily on general experience and judgment;

2. ~~Fack~~by analyzing documentary statements of duties;

3. ~~Fuck~~ by ascertaining the activities actually engaged in by persons on the job; and
4. ~~Fuck~~ by considering the amounts of time devoted to various duties, based on estimates or actual records. (9)

As was indicated in the definitions of job analysis stated above, it is the third method, ascertaining the activities actually engaged in by persons on the job, which is most commonly thought of as job analysis.

One of the projects outlined in the Five-Year Program adopted by the Committee on the Grading of Nursing Schools in 1926 was an analytical study of nursing procedures--a job analysis. The problem was delegated to Miss Ethel Johns and Miss Blanche Pfefferkorn who carried it through under direction and counsel of a special sub-committee on which Professor W. W. Charters served. The Committee on the Grading of Nursing Schools had taken the stand that before it could proceed to assist schools in preparing good nurses, it should first discover what good nursing is, and how it could be taught. In the report, published by the Committee on the Grading of Nursing Schools in 1934, this study is described as being "neither final nor complete." It does present materials believed to be of substantial value and theretofore unpublished. Notable among this material is the work done on a nursing activity analysis by

Isabelle M. Stewart. The summary statement of this report<sup>(13)</sup> suggests techniques of study for educators and administrators concerned with curriculum construction.

In 1934, the same year as that of publication of the preceding study, "A Time Study of Head Nurse Activities" was done at the University of Minnesota with Civil Works Administration funds for research, and is reported by Phoebe Gordon in The American Journal of Nursing.<sup>(10)</sup> This study sought to shed light on such questions as "What are the actual duties of the head nurse?"; "How many minutes does she spend in the various activities?" Miss Gordon, director of the study, expressed the belief that answers to questions such as these had important bearing on many problems of nursing care, nursing education, and hospital administration. It was not the aim of the C. W. A. project to draw conclusions from its findings; rather, it aimed at the presentation of accurate and objective information upon which others might draw for aid in the solution of various hospital problems.<sup>(10)</sup>

Activity analysis studies of various design and in random areas occurred at intervals during the ensuing 16 years, until in 1950, a concerted effort to synchronize research efforts of the national nursing organizations emerged. A status report of research programs in nursing appears in the first issue of Nursing Research, a



publication sponsored by the National League for Nursing. (14)

In May, 1950, the House of Delegates of the American Nurses' Association approved a research program on nursing functions "in recognition of a deep-rooted need to determine the proper allocation of the functions of all nursing personnel." (14) The ultimate objectives of the program were:

- (a) To determine what should be the functions and relationships of institutional nursing personnel of all types, that is, professional nurses, practical nurses, and auxiliary workers, in order to improve nursing care and to utilize nursing personnel most economically and effectively.
- (b) To determine what proportion of nursing time should be provided by each group in various situations.
- (c) To develop techniques for achieving the first two statements of purpose which can be applied to all types of hospitals and so obtain a national picture. (14)

A Master Plan for Studies of Nursing Functions in Hospitals was developed by The American Nurses' Association in 1950, to guide state and local groups in selecting problems for study and to guide The American Nurses' Association in reviewing applications to determine how each application fitted into the national program. (14)

There appears to be a parallel interest in studies of nursing functions in England. In a fairly recent report (1953) of a job analysis of personnel in hospital wards,

the reporters presented their findings as "thought-starters to hard-thinking," giving leads to needed areas of exploration in nursing in this country as well as England. (21)

Two methods for making observations of personnel have evolved. One method utilizes continuous, timed observations of activities, and requires one observer to shadow one person continuously throughout the observation period. This technique helps the observer understand the total job of the person under observation, but necessarily restricts the number of persons to be observed. Continuous observation provides data on time spent on each nursing procedure and is particularly useful when a specific problem needs to be studied or a work-picture is desired. However, continuous observation has been found to be costly, and the additional information secured about the person's job does not seem to warrant this approach for general application. (1)

The proponents of the method of continuous observation in activity analysis include Miss Phoebe Gordon, as is revealed in her early work (1934) at the University of Minnesota concerning head nurse activities, (10) and later in the study of nursing activities of all types of personnel under Miss Gordon's direction at the Charles T. Miller Hospital at St. Paul, Minnesota, reported in 1953. (11, 12)

The latter study was done for purposes of increasing efficiency and job satisfaction through extension and application of knowledge of nursing activities. (12)

The method of continuous observation was also applied in a study carried out in collaboration with the Massachusetts General Hospital in 1950. (10) This study was limited to the position of the head nurse, and revealed what the head nurse did, how much time she spent carrying out an activity, and how often she was interrupted. The specific findings were used as a basis for setting up an action program directed toward increasing the amount of uninterrupted time that the head nurse could spend on planning patient care, evaluating patient care, and discussing this care with medical and nursing staffs. (6,7,22)

In 1952, a manual (8) for studying head nurse activities in hospitals utilizing the continuous observation method was prepared for distribution by the Division of Nursing Resources of the U. S. Public Health Service so that other hospitals might make studies similar to the Massachusetts General Hospital study. This method has been adapted and used in a study of all unit personnel, (20) hospital supervisors, and public health supervisors at New York University.

The second method for studying what personnel are

doing consists of taking intermittent, instantaneous observations of their activities, or "work-sampling."<sup>(1)</sup> Work sampling originated in industrial management and dates back to the 1880's and the pioneering studies of Frederick W. Taylor.<sup>(24)</sup> The application of statistical theory to management problems by L. H. C. Tippett led to his development in 1935 of the technique of taking randomly spaced observations of workers which yielded the same information as the more costly and involved continuous time studies.<sup>(25)</sup> This method, taking randomly spaced observations, was further developed by Professor R. L. Morrow, who called it "ratio delay" because it was applied to the determination of the proportion of the worker's total time spent on delays.<sup>(16)</sup>

In the first work-sampling study done by the Division of Nursing Resources,<sup>(29)</sup> an important discovery concerning the work-sampling method was made. This was that, contrary to industrial engineering practice, it is possible to make unbiased observations of personnel by spacing the observations at regular intervals. It was found that the personnel, involved in the absorbing, fast-moving routine of a busy hospital floor, forgot completely about the regular appearance of the observer after the first few observations and did not deviate from their usual work patterns. None of the personnel performed activities

within a repetitive framework, but more or less in a random fashion. For these reasons, in work-sampling of nursing personnel, it is recommended that observations be regularly spaced in that it renders the method considerably less difficult to administer. It obviates the selection of a new sample each day, and the scheduling of the observations can be effectively pre-planned, promoting smooth administration of the study.(1)

The theory behind the technique of converting data which consist of intermittent spot observations of what unit personnel are doing into an estimate of the total length of time spent on the activity rests on the fact that the number of times an activity is observed as being performed is closely correlated with the total length of time spent on its performance.(1)

The first work-sampling study conducted by the Division of Nursing Resources was designed to analyze the activities of the head nurse, staff nurse, ward clerk, and floor manager.(29) The development of the technique in the above study provided the basis for a more extensive study of all unit personnel, later conducted in three Michigan hospitals.(27) The work-sampling method was also used in a study made at Harper Hospital.(5,28)

In general, these work-sampling studies were designed to find out:

- (a) How much time is spent by the different types of personnel on activities requiring their own level of skill?
- (b) How much time do nurses actually spend with patients?
- (c) How much nursing time goes into activities that could be performed by other classes of personnel?
- (d) What changes in staffing might help the nurse do a better job? (7)

In 1954, the Division of Nursing Resources of the Public Health Service, U. S. Department of Health, Education, and Welfare, published a manual described as a "practical new tool to use in finding specific answers to the problem of how to conserve professional nursing skills for their highest use and bring the nurse back to the patient." (26) This manual gives three steps in the method of work-sampling as applied to nursing personnel:

- (a) Taking samples of activities by instantaneous observation of the activities of all personnel on the unit every fifteen minutes.
- (b) Tabulating the samples of activities.
- (c) Analyzing the tabulations. (26)

As a guide to assignments for nursing students, activity analyses of nursing functions also assume significance. (23) Most of the studies dealing specifically with students' performance in the clinical nursing laboratory are unpublished and relatively difficult and/or expensive to obtain, existing usually in the form of

masters theses or doctoral dissertations, as indicated in the American Nurses' Association publication, Clearinghouse for Studies in Nursing. (2)

In summary, there seem to be at least three general purposes for activity analyses of nursing functions:

1. to provide sound factual data about the component elements of the profession of nursing;
2. to aid in devising realistic curricula for preparation of students for nursing; and
3. to aid in providing more advantageous staffing, or utilization of personnel, for the administering of nursing services in any given situation.

Two methods, continuous observation and work-sampling, have been developed for studying nursing functions. Each method has its own particular advantages; choice of technique would necessarily depend on the nature of the contemplated study.

CHAPTER III  
DESIGN OF THE STUDY

Procedure

A newborn nursery was the site tentatively selected for the study. Three nursing students who were assigned for clinical practice concurrently in the newborn nursery were tentatively selected as the subjects for the study.

Permission to conduct the study was sought from the Director of Nurses of the Hospital, the Director in Charge of the Basic Professional Program in Nursing, the Instructors in Obstetrical Nursing, the Head Nurse of the Obstetrical Unit, and the Assistant Head Nurse in Charge of the Newborn Nursery. The purpose and design of the study were explained to each of these administrators and teachers, all of whom responded to the request positively and with an accompanying expression of hope for the success of the study and interest in the findings.

The selected nursery was located in a general, 310-bed hospital which served as a teaching unit for both medical students and students in nursing. The nursery consisted of two large rooms, each of which could accommodate approximately 20 infants in their mobile bassinets; a small incubator room accommodating four incubators; a large



cabinet-lined work area and nurses' station combined; a scrub room which also doubled for an examining room for doctors, medical students, laboratory technicians, and other authorized persons who were non-nursery personnel; and a precaution unit, with its separate utility room, located across the corridor.

In this nursery, care was provided for the newborn infants received directly upon delivery and continuing usually until the infants were about five days old. Generally these infants were "well-babies," although occasionally infants with mild disorders were admitted or those with more serious problems were admitted for temporary care until transfer arrangements could be made to an adjacent hospital with special facilities for the treatment of infants and children with disorders.

The average daily census in the selected newborn nursery for the 12 days during which observations were made was 13.2 infants. The average daily census for the selected nursery during the calendar year preceding this study (1957) was 16.4 infants.

The regular day (7:00 a.m. to 3:30 p.m.) staff for the selected newborn nursery usually included the head nurse, who was in charge of the entire obstetrical unit, including the postpartum division, the delivery room suite, and the newborn nursery; the assistant head nurse, who was directly

in charge of the newborn nursery; a graduate nurse; and a practical nurse. The staffing pattern was lighter on evening, night, and weekend shifts of duty. Three nursing students were usually assigned to the newborn nursery, two of whom were assigned to clinical practice in the nursery, per se, with the third student being assigned to the preparation of formula for the newborn infants. Formula was prepared in a laboratory located on the same corridor, and usually required the early part of the forenoon, after which the nursing student was assigned to practice in the nursery for the remainder of her designated time for that day. Janitorial service for the nursery areas was provided by the housekeeping department of the hospital.

The three students selected as a representative sampling for this study were in the second quarter of the third year of a four-calendar-year, basic professional program in a collegiate school of nursing. Prior to this clinical practice assignment, the students had completed at least five quarters, designated as pre-nursing and requiring certain prescribed courses, in an accredited university or college, and an additional five quarters in the basic professional nursing program, which included study of the basic sciences (anatomy, physiology, bacteriology, organic and biochemistry, and pharmacology) and the following courses in nursing: introduction to nursing, medical and

surgical nursing, diet therapy, operating room nursing, professional adjustments, public health and communicable disease, and community resources.

The observations for this study were made during the fourth, fifth, and sixth weeks of the students' 12-week course in obstetrical nursing. The students were taking courses in principles of teaching and communications in nursing concurrently with obstetrical nursing. The average 40-hour week for these students included ten hours of classroom instruction (five in obstetrical nursing, three in principles of teaching, and two in communications in nursing), one hour of ward conference in the obstetrical unit, and 29 hours of supervised clinical practice in the obstetrical department. The clinical practice was divided into four segments: obstetrical clinic, postpartum unit, delivery room, and newborn nursery, which included preparation of formula.

The three students selected as subjects for this study came to the newborn nursery after a week's orientation to the total obstetrical department and two weeks' experience in the postpartum and delivery room areas. After their three weeks' practice in the newborn nursery, the students returned to the postpartum and delivery room areas of the obstetrical department for five additional weeks of supervised clinical practice and to the obstetrical

outpatient clinic for one week.

A typical hour pattern of clinical practice was devised from the hour schedules of the nursing students assigned to the selected newborn nursery during the Winter Term, 1958. It was found that the most commonly assigned practice was during the day (7:00 a.m. to 3:30 p.m.). Occasionally, however, the students were assigned to clinical practice in the selected newborn nursery from 7:00 to 9:00 a.m. in the morning and returned to practice from 3:00 p.m. to 7:00 p.m. in the afternoon. Night duty (11:00 p.m. to 7:00 a.m.) was encountered once during the three weeks. The observations for this study were made during nine full days, two part days, and one night.

Inasmuch as the three nursing students selected as subjects for this study were assigned to the nursery for a concurrent experience of three weeks, it was decided to observe one-third of the clinical practice of each of the three students. The result was 90 hours of observations, or the equivalent of one total nursing student experience in the selected newborn nursery. It was thought that by arriving at a composite student experience from equal observations of the three students composing the representative sampling, the activities would be more exemplary of those of other nursing students than would have been the case had only one nursing student been observed for the

entire 90 hours.

An effort was made to observe the three students in rotation. However, this was found to be imperfectly possible.\* The nursing students were observed in the following order: first week, A-B-C-B; second week, C-B-A-A; and third week, B-A-C-C. Each of the three students was observed at least once during each week of practice in the newborn nursery. Each student was observed for four days of the 12 comprising the total days of observations. Each student was observed for 30 of the 90 hours which comprised the typical clinical practice assignment in the selected newborn nursery.

The form devised for recording the observations was an adaptation which grew out of suggestions gleaned from at least four sources. (8, 10, 13, 26) A lined legal tablet ( $8\frac{1}{2}$  x 14 inches), with a two-inch heading and 32 spaces, was employed for recording the activities of the nursing students. When the tablet was divided into halves

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\*The obstetrical nursing instructor in charge of the hour schedule of clinical practice for the nursing students offered to make any reasonable changes in the students' hours which the investigator desired for purposes of this study. However, the investigator declined to request that the students' hours be adjusted in order that the observations could be made in perfect rotation, inasmuch as the students had, in some instances, made previous plans for days off. It was thought that rotation of observations of the students insofar as possible within the limits of the students' regularly assigned hours would be sufficient for purposes of this study.

lengthwise, over 60 spaces were provided for recording. Therefore, each space represented one minute, and each page represented one hour of observations. This arrangement was found to be very convenient in analyzing the data and in computing the totals. As has been indicated, the minute was taken as the unit of observation. Activities requiring less than a minute were recorded in running form on the proper minute line, and the investigator relied on her judgment in allocating the divided minutes to an appropriate category during the subsequent analysis of the data.

The establishment of categories prior to the observations was considered, but discarded in favor of a running account which would render a more complete picture of the students' activities in the clinical practice area. The data are of such a nature that other studies could be drawn from them; e.g., comparison of the performance of the same student from one week to another; comparison of the performance of the three students; sources of the students' instruction (answers to questions, demonstrations, orientations, and the like). The heading of each record form included the day of the study; the day of the week, month, and year; the hour; the census of the selected newborn nursery for that day (ascertained at 7:00 a.m.); and the code letter (A, B, or C) by which the student being observed was identified.

Permission was granted to conduct a one-day practice period of observation in the selected newborn nursery during the term (Fall, 1957) preceding the study. In this manner, the observer was able to familiarize herself with the physical environment of this obstetrical unit and with the policies in effect in the selected newborn nursery. Some acquaintance with the regular staff was achieved and opportunity was provided for explanation of the study to the staff members, which facilitated their acceptance of the investigator in the area. The investigator developed skill in the use of the devised record form during this orientation and practice period.

The three nursing students who had been selected as a representative sampling for the study had been informed by their obstetrical nursing instructor that, "a graduate nurse who was working for her masters degree would be making a study in the newborn nursery involving the nursing students assigned there for clinical practice." The investigator gave the selected nursing students a brief explanation of the purpose and design of the study and solicited their participation. The students unanimously agreed to undergo the observations, manifesting interest in the study and a spirit of full cooperation.

The nursing students seemed to accept the investigator readily, and after the first few hours of observation,

claimed that they lost, in large measure, their self-consciousness in being watched. The students did show some concern (at coffee time) lest the purpose of the observations was that of evaluation. However, it was reiterated that the purpose of the study was simply to learn the nature of the nursing student's activities in the newborn nursery and assurance was given that the records would be coded with regard to each individual student's identity. The students appeared reassured and seemingly entered wholeheartedly into the spirit of the study.

It might be mentioned that, inasmuch as the hospital in which the selected newborn nursery was located serves as a teaching unit for various kinds of students, research studies of diverse design are common and continuous occurrences, which explains in part the nursing students' ready acceptance of being the subjects of close and protracted observation.

In making the continuous timed observations, the investigator remained close enough to hear and see what it was the student was saying and doing. However, the investigator did try to remain as unobtrusive as possible. The major difficulty encountered in obtaining the data for the study was in that the students often turned to the investigator with questions regarding procedure or policy. Inasmuch as the investigator had never been employed in the



hospital where the study was conducted, she was able to plead ignorance to the policy in effect regarding routine procedure. This technique seemed to maintain rapport between investigator and student, while forcing the student to solve her problem independently or to seek assistance in the usual manner. Most often, it seemed the student was simply using the investigator as a "listening post" in audibly reasoning to herself.

During the one night of observations when the nursing student met many new and unusual circumstances while relatively isolated from a ready source of assistance, the investigator found it most difficult to stand by in the role of the detached observer.\*

After the 90 hours of observation had been completed, analysis of samples of the data led to the derivation of trial categories. These trial categories were found to be markedly similar to those categories described in the pamphlet published by the Division of Nursing Resources of the Public Health Service, United States Department of Health, Education, and Welfare: How to Study Nursing Activities in a Patient Unit. (26) The ten categories defined in this study may be considered as stemming from

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\*It is presumably for this reason that it is so often assumed that nurses are unsuited to action research in the clinical nursing areas.

the categories described in the pamphlet mentioned above, (26) with some modification and additions designed to point up certain areas of activities which might be considered more significant in an analysis of the nursing student's activities than in a study of the activities of nursing service personnel.

The ten categories may be defined for purposes of this study as follows:

1. Patient: Giving care--carrying out a nursing procedure for the patient or assisting doctors with treatments or procedures (e.g., bathing a baby; assisting the doctor with an examination of an infant).
2. Patient: Other direct activities--all activities in the patient's presence that are not considered as falling in Category 1 (e.g., evaluation of the patient's need for care; observing physical condition and behavior of patients).
3. Patient: Exchange of information about patient--exchanging verbal reports about a specific patient or patients with unit personnel, nursing service administration, physicians, other hospital departments, patients' families and friends, and other interested persons or agencies (e.g., listening to or giving reports; receiving or

giving an assignment relating to patient care; reporting on or off duty).

4. Patient: Indirect care--all other patient-centered activities not in the presence of the patient and not involving an exchange of information about a patient (e.g., care of records and record forms relating to patient care; charting of care given; preparation of medications and treatments; the assembling and terminal care of equipment).
5. Patient: Teaching--instruction of mothers or other family members in the care of the infant, in formula preparation, and the like.
6. Instruction: Received by the nursing student\*--any identifiable instruction received by the nursing student (e.g., ward conferences; orientation to the newborn nursery; demonstration of procedures and equipment; answers to questions of the student and explanations, suggestions, and comments pertaining to the care of the newborn infant and the obstetrical patient, or policies

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\*The source of instruction was recorded in each instance (e.g., physician, clinical instructor, head nurse, graduate nurse, practical nurse, aide, another nursing student). This information readily lends itself as data for an additional analysis. However, the investigator restricted the findings presented here to defining the nature of the nursing student's activities.

- in effect in the selected newborn nursery).
7. Formula preparation--preparation of the formula for the newborn infants for which care was provided in the selected newborn nursery.
  8. Maintenance of equipment, supplies, and the physical environment--all activities involved in obtaining the requisite equipment and supplies for the unit, including determining standard inventory, requisition, storage, processing, and exchanges of information regarding these activities; all activities which contribute to maintenance of cleanliness, orderliness, and safety of the unit, including all discussions and exchange of information regarding these activities.
  9. Stand-by--time when the student was unoccupied and waiting for something to do.
  10. Personal--all activities of a personal nature, such as conversation about personal affairs, coffee time, and the like.

Categories 1, 2, 3, 4, 8, and 10 were adopted from the pamphlet, How To Study Nursing Activities in a Patient Unit, (26) mentioned above. Categories 5, 6, 7, and 9 were devised by the investigator for purposes of this study.

Time in travel (i.e., walking in the corridor) was not

recorded separately, but was placed in a category on the basis of what the student did when she arrived at her destination. Similarly, when the student washed her hands, or scrubbed and gowned, the time for such activity was classified in the same category as the procedure for which she had prepared herself.

Time spent at meals was considered off-duty time. However, if the student stayed beyond the allotted 30 minutes, the extension was entered in Category 10, Personal.

#### Findings

Figure 1, located on page 34, reveals the distribution of the nursing students' 90 hours of clinical practice in the selected newborn nursery in terms of the ten categories defined above.

During the course of these observations, which was equivalent to one nursing student's total experience in the selected newborn nursery, 1,169 minutes, or 21.7 per cent of the time, was used in giving direct care to the infant. The students spent 256 minutes, or 4.8 per cent of the time, in other activities in the immediate presence of the infant or mother. Exchange of information about the infants and mothers required 296 minutes, or 5.5 per cent of the total experience. Indirect care of the infant or mother required 809 minutes, or 15 per cent of the student's time. Teaching

mothers occupied 53 minutes, or 1 per cent of the total clinical experience. All patient centered activities, excluding instruction received by the nursing students, totaled 2,583 minutes, or 48 per cent of the clinical practice time.

Instruction received by the nursing students occupied 338 minutes, or 6.3 per cent of the time. Formula preparation required 207 minutes, or 3.9 per cent of the student's clinical practice time. Care of equipment and supplies absorbed 1,093 minutes, or 20.3 per cent of the total time. Formula preparation and care of equipment, supplies, and the environment took up 1,300 minutes, or 24.2 per cent of the nursing student's clinical experience in the newborn nursery.

Finally, 648 minutes, or 12 per cent of the time, was used in waiting or standing by in a state of readiness to do any designated activity. Personal activities absorbed 531 minutes, or 9.5 per cent of the total time. Stand-by and personal time combined amounted to 1,179 minutes, or 21.5 per cent of the student's total experience in the newborn nursery.

## CATEGORIES

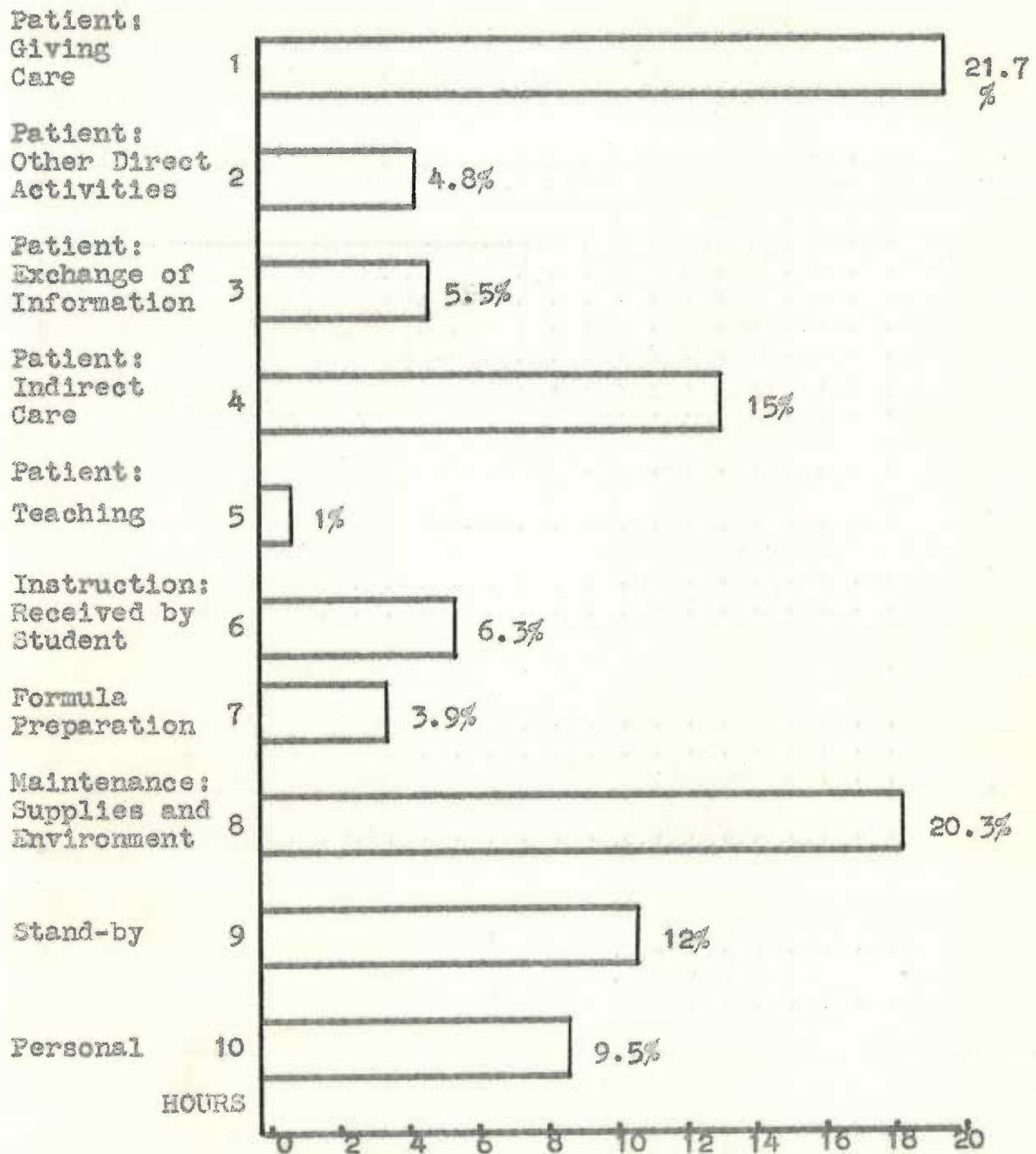


Figure 1

DISTRIBUTION OF  
NURSING STUDENTS' TIME IN A SELECTED NEWBORN  
UNIT IN TERMS OF TEN DEFINED CATEGORIES OF ACTIVITIES

## CHAPTER IV

### SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

#### Summary of the Study

This study was made to determine the nature of the activities performed by the nursing student while assigned for clinical practice in the newborn nursery.

The site and subjects for the study were tentatively selected. Approval for conducting the study was obtained from the administrative and instructional personnel concerned. Thereupon, a plan was developed which included continuous, timed observations of three representative nursing students in the third year of a four-calendar-year, basic professional program in a collegiate school of nursing. The pattern of observations was designed to follow the typical hour schedule of the nursing students assigned for clinical practice in the selected newborn nursery. Ninety hours of activities (the equivalent of one total student experience in the newborn nursery) were observed. The observations extended over a three-week period of time and included nine full days, two part days, and one night.

Preceding the actual observations, the investigator underwent a practice period of one day for the purposes of:



1. becoming oriented to the selected newborn nursery,
2. gaining familiarity with the established policies of the selected newborn nursery, and
3. developing skill in recording observations on the prepared record form.

A brief explanation of the purpose and design of the study was given to the three nursing students selected as a representative sampling for this study. The students unanimously agreed to undergo the observations, manifesting interest in the study and a spirit of cooperation.

The students were observed one at a time and in rotation insofar as possible within the limitations of their hour schedules of clinical practice. Each student was observed for 30 of the 90 hours and during four of the 12 days which were encompassed in the study.

Categories, based essentially on those described in the pamphlet, How to Study Nursing Activities in a Patient Unit, prepared by the Division of Nursing Resources of the Public Health Service, U. S. Department of Health, Education, and Welfare and published in 1954, (26) but modified to meet the purposes of this study, were defined and used in analyzing the 5,400 minutes of activities.

It was found that 21.7 per cent of the nursing student's time was used in giving direct care to the infant;

4.8 per cent of the time was used in other activities in the immediate presence of the infant or mother; 5.5 per cent of the time was used in exchange of information regarding the infant or mother; 15 per cent of the time was used in indirect care of the infant or mother; 1 per cent of the time was used in teaching the mothers or other members of the infants' families; 6.3 per cent of the time was used in receiving instruction; 3.9 per cent of the time was used in formula preparation; 20.3 per cent of the time was used in the care of equipment, supplies, and the environment; 12 per cent of the student's time was stand-by or waiting time; and 9.5 per cent of the time was used in personal activities.

### Conclusions

From this study, it may be concluded that the activities of the sampling of nursing students in the selected newborn nursery were divided into four general areas:

1. Approximately one-half of the clinical practice time centered about patient care;
2. Approximately one-fourth of the clinical practice time was devoted to upkeep of equipment, supplies, and the environment;
3. Approximately one-fifth of the clinical practice

time was absorbed in waiting and in personal activities; and

4. Approximately one-twentieth of the clinical practice time was utilized in receiving instruction.

The scope of this study is considered to be too restricted to provide a valid basis for drawing final conclusions as to the nature of nursing students' activities in the clinical practice areas. Furthermore, it was not the purpose of this study to evaluate the propriety of the clinical practice activities as learning experiences for nursing students. However, if other studies were found to reveal a similar distribution of the nursing student's time in the clinical practice area, it would seem reasonable to recommend that these clinical practice activities be evaluated with reference to the educational objectives of the curricular unit of which the clinical activities form a part. Depending upon the criteria against which the nursing student's clinical practice activities are judged, direction would be indicated for perpetuation, modification, or further development of the educational program in nursing.

### Recommendations for Further Studies

A repetition of this study is recommended for the purpose of comparing findings. A similar study including more subjects observed over a longer span of time might be useful for a more comprehensive determination of the nature of the nursing student's activities in a newborn nursery.

Similar studies conducted in other institutions offering the collegiate program in nursing as well as in institutions offering diploma programs would be of value for comparative analyses. Similar studies in other clinical practice areas (e.g., medicine, surgery, pediatrics, psychiatry, and the like) would be essential in obtaining a total picture of the nursing student's activities during clinical practice assignments.

Another approach to analyzing the nursing student's activities during clinical practice would be the time-sampling method of observation, which has been put to fairly wide-spread use in evaluating nursing service during the past decade. A team of investigators working in a field of larger scope with the time-sampling method of observation could be expected to obtain a more exemplary or typical picture of the activities of nursing students in the various clinical practice areas than is possible with individual segmental studies.

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APPENDIX A  
SAMPLE OF OBSERVER'S RECORD

Day of Study 1 Day of Week Tuesday Student A  
Date 1/21/58 Hour 7:00 to 8:00 a.m. Census 20

Min.	Activity	Cat.	Min.	Activity	Cat.
01	Wtg mg rpt	9	31	Secured 2 empty bas	4
02		9	32	Dem (R.N.) bth,temp,wt	6
03	Mg rpt pp & del	3	33		6
04		3	34		6
05		3	35		6
06		3	36		6
07		3	37		6
08	Mg rpt nsy	3	38	(R.N. explained scales,gms)	6
09		3	39		6
10		3	40		6
11		3	41		6
12		3	42		6
13	To dsg rm	4	43		6
14	Instr(H.N.) re dsg for nsy	6	44		6
15	Dsg for nsy	4	45		6
16		4	46	Dem (R.N.) chtg	6
17		4	47		6
18		4	48	Wsh hnds	4
19	Instr (H.N.) re sbg for nsy	6	49	Assembl linen	2
20	Sbg for nsy	4	50	Und b	1
21		4	51	Temp	1
22		4	52		1
23		4	53	Wt	1
24	Instr (H.N.) re dem by R.N.	6	54	Rec wt & temp	4
25	Rolled cart into nsy	8	55	Bth b	1
26	Q (R.N.) re elg dpr cart	6	56		1
27	Q (R.N.) re autocl linen	6	57		1
28	Dem (R.N.) prep linen cart	6	58		1
29		6	59		1
30		6	60		1

Minute totals for each category:

I 10      II 1      III 10      IV 12      V 0  
VI 24      VII 0      VIII 1      IX 2      X 0



## APPENDIX B

## SAMPLE OF OBSERVER'S SHORTHAND

assembl.	assemble
autocl	autoclave
b.	baby
bas.	bassinet
bth.	bath
chtg	charting
clg.	cleaning
del.	delivery
dem.	demonstration
dpr.	diaper
dsg.	dressing
gms.	grams
H.N.	head nurse
hnds	hands
instr.	instruction
mg	morning
nsy.	nursery
pp	postpartum
prep	preparation
q.	question
re	regarding
rec.	record
rm	room
R.N.	registered nurse
rpt.	report
sbg.	scrubbing
temp	temperature
und.	undress
wsh.	wash
wt	weight
wtg.	waiting

Typed by  
Freida M. Smith