



An evaluation of personnel knowledge and understanding of basic orthopedic nursing care
by Myrna Jean Mink

A thesis submitted to the Graduate Faculty in partial fulfillment of the requirements for the degree of
MASTER OF (SCIENCE in) Nursing
Montana State University
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Abstract:

The purpose of this study was to indicate both to nursing administrative personnel and to nursing educators, problem areas which deal with orthopedic nursing care.

It was, therefore, necessary to: (1) evaluate orthopedic nursing care; (2) to determine if the nursing personnel on an orthopedic unit know and understand basic orthopedic nursing care; (3) to identify areas in orthopedic nursing which are found to demonstrate a need for further reinforcement for better nursing care; and (4) to determine from these areas content to be included in inservice education programs.

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The results of this survey indicate that four areas of orthopedic nursing care are basic in the care of orthopedic patients: care of the patient in traction, care of the patient in a cast, and turning a patient. The results of the test showed that personnel who had had training in orthopedic nursing care as in inservice classes, workshops, or formal education scored significantly higher than personnel who had not received special training. Personnel scored fewer in the areas involving traction and cast care although test results showed the need for further education in all four areas. The purpose of traction, the purpose and principles of countertraction, care of the patient confined to a cast - observation and cast care; care of the patient after prosthetic surgery are all subject content to be included in an inservice education program.

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A thesis submitted to the Graduate Faculty in partial
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June, 1973

ACKNOWLEDGMENT

The researcher wishes to express her sincere thanks and appreciation to the following persons:

Miss Virginia Felton, who devoted extensive time in guidance and encouragement in the formulation of this thesis.

The graduate faculty of Montana State University School of Nursing without whose support and guidance this study would not have been possible.

The Director of Nurses from the five hospitals without whose cooperation this study would not have been possible.

Her parents, Mr. and Mrs. John Mink, whose love and support were ever there.

Her very dear friends, Mr. and Mrs. Ernest Terpstra, for their patience, help, and encouragement.

Her former employer, Thomas C. Power, M. D., whose training and encouragement gave the foundation for this study.

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ABSTRACT

The purpose of this study was to indicate both to nursing administrative personnel and to nursing educators, problem areas which deal with orthopedic nursing care. It was, therefore, necessary to: (1) evaluate orthopedic nursing care; (2) to determine if the nursing personnel on an orthopedic unit know and understand basic orthopedic nursing care; (3) to identify areas in orthopedic nursing which are found to demonstrate a need for further reinforcement for better nursing care; and (4) to determine from these areas content to be included in inservice education programs.

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Chapter 1

INTRODUCTION

Orthopedic units are being established in general hospitals throughout the country. The nurses responsible for the care of orthopedic patients are introduced to problems in caring for patients in traction, in heavy body casts, and those who have special problems because of the nature of their injury or surgery. The importance of keeping these patients in good body alignment as well as being conscious of their own body mechanics, important for all nursing care but especially when caring for orthopedic patients, has been stressed to prevent fatigue for both patient and nurse. The orthopedic unit then if it is to be considered a specialized unit is staffed by personnel who have been trained and understand the techniques and procedures which are applied in the care of orthopedic patients.

What do the nursing personnel on an orthopedic ward know about the care of orthopedic patients whether they be medical or surgical? Are many complications due to poor nursing care? Is poor nursing care due to the fact that the personnel on the unit have not had adequate instruction in the basic nursing care of the orthopedic

patient? If instruction has been received do the personnel apply nursing care with an understanding of why they are doing what they are doing? Can the nurse assume responsibility for the patient if she does not understand specific instructions which must be carried out in his nursing care?

Before inservice education programs can be constructed for teaching personnel new techniques, procedures, and equipment that are being introduced, there is a need first to investigate whether personnel know the very basic care which is specific in the care of the orthopedic patient.

According to Helen Mussallem,

Our nursing ancestors had to deal with scarcity, primitive conditions, physical hardships and danger. We have to deal with problems created by great technological riches and radically altered attitudes.¹

What we suffer from is fragmentation--fragmentation that could lead to depersonalization of nursing care. Where do inservice education programs focus their attention? Nursing personnel are introduced to the new developments in orthopedic nursing without having adequate orientation to the unit and to the care of the patient which is specific

¹Helen K. Mussallem, "The Expanding Role: Where Do We Go From Here?" The Canadian Nurse, Vol. 67, No. 9, (September, 1971), pg. 31.

to orthopedic patients and which separates these patients from patients on either a medical or surgical unit.

Is there a guide which can be followed by nursing service directors for orienting new personnel to the orthopedic unit? If the director is aware of the weaknesses present in personnel knowledge and understanding of orthopedic nursing care she is in a position to develop programs to orient new personnel and to reinforce nursing care.

If the personnel are aware of weaknesses in their nursing care they might take a personal interest in programs planned for their enrichment. Each nurse has the responsibility to be informed and to be involved in upgrading her nursing performance.

According to Eleanor Muhs, "Adequate medical care is rapidly becoming recognized as an inalienable right, and it is imperative that we reassess the functions of various groups of nursing personnel."²

The number of people requiring orthopedic attention is increasing rapidly. This is shown by the increase in the number of accidents on our nation's highways and

²Eleanor Muhs, "Inservice Education: An Investment in Nursing," Nursing Research, Vol. 17, No. 2, (February, 1969), pg. 50.

accidents occurring in sporting activities, and in the fact that people are living longer and so suffer degenerative changes which demand medical attention, so it becomes a nursing responsibility to meet their needs.

Statement of the Problem

If nursing personnel are to provide orthopedic patients with the competent care patients expect to receive, an evaluation of nursing care should be the first step toward improved service. Areas of poor nursing care need be identified so that correction may be instituted through inservice education programs.

Purpose of the Study

The purpose of this study was (1) to evaluate orthopedic nursing care in five general hospitals; (2) to determine if the nursing personnel on an orthopedic unit know and understand the nursing care they are rendering to their patients; (3) to identify areas in orthopedic nursing which are found to demonstrate a need for further reinforcement for provision of better nursing care; and (4) to determine from these findings content to be included in inservice education programs.

Assumptions

1. Inservice education is important in improving nursing care on an orthopedic unit.

2. The orthopedic unit because of its type of patients and the specialized nursing care which is required can be considered a special care unit.

3. The basic nursing care of orthopedic patients, even though in itself is specialized care, should be known and understood by all personnel on orthopedic units whether these are professional, licensed or auxillary.

4. If areas in orthopedic nursing which need strengthening can be identified, inservice education programs can be established to present specific content for study to maximize the nursing care potential on orthopedic units.

5. The nursing personnel on orthopedic units should be given the opportunity to express recognition of their weaknesses in nursing care rendered and inservice education programs should include these areas.

Limitations

1. This study does not set up an inservice education program but was done to establish those areas

which need to be dealt with through inservice education.

2. This study was limited to orthopedic nurses from five major hospitals in Montana.

3. The questionnaires and tests were given to the nursing personnel by the director of nursing service. The investigator worked only through the director at each hospital. The director gave the questionnaires and tests to the selected personnel on the unit. Her interpretation of the importance of the study and her explanation to the personnel may have influenced the completion of the forms.

4. The investigator had no control over the environment as the director chose the time and place the personnel were to fill out the forms.

5. In selecting the sample, there was no control set for the length of time a staff member had worked on the unit. Whether one week or ten years she was asked to complete the two forms. No personnel that float irregularly to the unit were participants in the study.

6. The questionnaires and tests were given to nursing personnel with a wide range of levels in educational background and experience in orthopedic nursing.

7. There was no control set for a predetermined number of nurses from each position. Nurses were selected

at random from the Registered Nurses, Licensed Practical Nurses, Nursing Assistants, and Orderlies employed on the orthopedic ward.

8. The study was limited to hospitals which had a defined orthopedic unit which they used specifically for orthopedic patients.

Research Design

The study was based on a descriptive survey using nursing personnel from five hospitals in Montana. The Director of Nursing selected twenty nursing personnel from the orthopedic unit of each participating hospital. Questionnaires and tests were brought to the participating hospitals to be distributed to the selected personnel by the director of nursing. From the questionnaires, data were analyzed to determine general information about each of the participants, educational background, present position held, orthopedic nursing experience, past orthopedic training and each participants definition of orthopedic nursing care. The test consisted of questions concerning four areas of orthopedic nursing basic to the care of all orthopedic patients:

- (1) body mechanics of both the patient and nurse

- (2) care of the patient confined to a cast
- (3) care of the patient in traction
- (4) turning a patient following surgery.

Results from the tests were analyzed to determine frequency distribution of errors made in specified areas, distinction between position scores on the tests and, according to weight percentages, those areas which are in need of further instruction or clarification.

Definitions

Nursing--long recognized as an art; a body of practical knowledge which tells how to work to produce certain results which is the discipline of nursing; a body of knowledge based on a large number of carefully collected facts which have been arranged and classified in such a way as to establish certain laws and principles; the why of things by finding out and describing forces that work to produce the facts which have been observed.

Orthopedics--that branch of medicine that deals with the prevention, diagnosis, and treatment of injuries to and diseases of the musculoskeletal system.

Musculoskeletal system--a dynamic group of tissues providing structural support, allowing for voluntary motion,

and giving protection to vital organs of the body.

Nursing procedures--specific method of action which the nurse must carry out in the care of the patient;

manual and behavioral skills for specific task assignment.

Procedure--method or manner of proceeding in a process or course of action order or system of performing operating, conducting.

Posture--the relationship of the various parts of the body, when standing, sitting, lying or moving;

determines the distribution of body weight and the pull of the joints and muscles.

Traction--a pulling force applied to an extremity or a part of the body.

Countertraction--a pull exerted in the opposite direction of the pull produced by the traction apparatus.

Scientific principles--comprehensive and fundamental laws, doctrines, truths, or sets of facts that form the basis for established rules of action.

Registered Nurse--a graduate nurse who has been registered and legally licensed to practice by state authority;

expected to function as an independent practitioner in those activities which need no physician's legal order; as a dependent practitioner in carrying out physician orders for treatment; and cooperatively with other members of the hospital personnel.

Licensed Practical Nurse--his/her role is in giving nursing care to the patient in a relatively stable condition with a minimum amount of supervision by the Registered Nurse;

in assisting the Registered Nurse or the physician in caring for the patient in more complex nursing situations.

Nurse's Assistant--auxiliary nursing personnel delegated under the direct supervision of the Registered Nurse to carry out those tasks for which she is competent.

Orderly--male attendant in a hospital responsible for care or preparation of male patients and those duties delegated and under the direct supervision of the Registered Nurse.

J.C.A.H.--Joint Commission on the Accreditation of Hospitals.

Inservice education--planned educational experience provided in the job setting and closely identified with service;

a system or method employed by an institution or organization for imparting the information or knowledge needed by employees in order that patients might receive safe, efficient and therapeutic nursing care.

In order to qualify the statements in which competent, knowledge and understanding are used, in this study the investigator defines these terms as follows:

1. Competent--having necessary or essential ability or qualities, legally qualified or capable;
2. Knowledge--the remembering of previously learned material, bringing to mind appropriate information, acquaintance with a science, art, or technique;
3. Understand--to interpret, to apply, to see relationships, and to make judgments;
ability to recognize cause and effect relationships to have a thorough or technical acquaintance with or expertness in the practice of.

Overview of the Remainder of the Study

The second chapter of the study presents a review of the related literature. The third chapter contains the study methodology, the objectives, and the analysis of the

data received from the returned questionnaires and tests. The fourth chapter presents a summary of the study, conclusions, and recommendations for further study.

Chapter 2

REVIEW OF RELATED LITERATURE

The literature that is presented in this study tries to establish the specific nursing care of orthopedic patients and the importance of inservice education in improving nursing care.

For centuries, nursing was broadly interpreted to mean the care of the sick, the disabled, the aged, and the dying. The nurse was recognized as privileged to give personal care to individuals having needs arising from illness situations. Until recently the nurse was concerned primarily with the relief of suffering. Today the nurse is no longer merely an attendant in the sickroom but is one who is prepared to administer skilled, personalized, dynamic care to the ill. The present emphasis is being placed upon preventive and educational aspects of health care which has contributed to nursing by becoming an essential part of all health and medical services. Nursing is practiced wherever illness is to be treated. In the transitional process not only have the scope of nursing practice and the knowledge and skills increased, but also the nurse has developed broader concern with the

total health needs of the patient. Today, nursing cannot be considered in isolation from other aspects of health care.¹

The chief purpose of nursing today is to help the individual to attain or maintain health. Much depends upon the nurse's skill in giving nursing care to the patient. The acquisition of skills takes long and careful practice. Skills which the nurse may be expected to master include skills in observing, dealing with and influencing people, certain skill in manual dexterity needed in certain techniques, and skill in operating types of machines used in giving nursing care.²

The word "orthopedics" is a Greek word meaning "straightening of children." The first medical concern of orthopedics was in correcting deformities in small children. According to Larson and Gould's Orthopedic Nursing, orthopedic nursing was first defined as the application of the

¹Shirley Gragg and Olive Rees, Scientific Principles in Nursing, 6th edition, (Saint Louis: The C. V. Mosby Company, 1970), pg. 3.

²Esther M. McClain and Shirley Hawke Gragg, Scientific Principles in Nursing, 5th edition, (Saint Louis: The C. V. Mosby Company, 1966), pg. 5.

principles of body mechanics to all nursing. The principles of proper body mechanics and body alignment were referred to as the orthopedic aspects of nursing care.³

The principles of proper body mechanics and body alignment are fundamental to the care of every patient; as such they are principles of good nursing care. There are three principles that can guide the nurse in giving care to any person. These principles are stated as follows:

Man as a Person--Each person is an individual member of society who has rights, privileges and immunities which should be respected, regardless of race, creed, social or economic status, and has personal fears and needs which usually are exaggerated when there is a threat to his well being.

Man as a Organism--The human body requires that certain physiologic activities be maintained if the body is to function effectively.

Man and his Environment--Appropriate precautionary measures will help to reduce or eliminate physical, chemical or biologic factors in the environment which cause illness or injury to man.⁴

³Caroll B. Larson and Marjorie Gould, Orthopedic Nursing, 7th edition, (Saint Louis: The C. V. Mosby Company, 1970), pg. 2.

⁴Elinor V. Fuerst and LuVerne Wolff, Fundamentals of Nursing, 4th edition, (Philadelphia: The S. B. Lippincott Company, 1969), pg. 32.

Sources have identified the functions of the musculoskeletal system and nursing care of the patient with a disturbance in the musculoskeletal system.

Today, orthopedics involves the musculoskeletal system of people of all ages. Bones, muscles, cartilage, ligaments and fascia compose the musculoskeletal system and provides the body with its structural framework, its protective casing, its power, its defense system, its static stability and its means of locomotion. In orthopedic nursing, nursing care concerns the patient with involvement of the musculoskeletal system. Therefore, the equipment or apparatus used in the care of the orthopedic patient is selected for the purpose of maintaining or restoring function of the musculoskeletal system of the patient.⁵

There is no single approach to nursing action. Each patient is a person having characteristics that make his situation unlike that of other persons. Therefore, there is variation in nursing care as applied to several individuals or even to one individual at different times.⁶

⁵Lillian Sholtus Brunner et. al., Textbook of Medical Surgical Nursing, 2nd edition, (Philadelphia: The S. B. Lippincott Company, 1970), pg. 834.

⁶Fuerst & Wolff, op. cit., pg. 5.

The patient with a musculoskeletal condition faces not only physical problems but also psychological and social problems. Because orthopedic patients are of all ages; economic problems are usually present. Long periods of disability are especially threatening to the wage earner. The patient facing a long period of disability may be in need of emotional and spiritual support as well as physical attention. Nursing care must help meet these needs and solve the problems of patients who are not able to function in normal activities.⁷

"Each patient is an individual, and, when he enters the hospital, he brings with him a lifetime of behavior patterns, hopes, ambitions, frustrations, and problems," according to Dorothy Johnston.⁸

An objective of his nursing care is to assist him to full recovery in the shortest time possible with the least discomfort that his condition permits. Maintaining normal range of joint motion and providing for active or passive exercise, functional positions, and correct body

⁷Brunner, op. cit., pg. 835.

⁸Dorothy F. Johnston, Total Patient Care: Foundations and Practice, 2nd edition, (Saint Louis: The C. V. Mosby Company, 1968), pg. 14.

alignment are some of the essential aspects of patient care.⁹

Many orthopedic patients are required to remain in plaster casts, traction, or other forms of immobilization over long periods of time. Nursing care must emphasize positioning to prevent contractures and the development of deformities. Attention must be given to the normal extremity as well as the involved limbs if complications are to be prevented.¹⁰

Emphasis has been placed on the importance of turning patients to prevent pulmonary complications. Larson research has confirmed the fact that turning the patient as little as 12 degrees is sufficient to prevent pulmonary complications, to stimulate circulation, and to prevent decubitus ulcers.¹¹

At no time should an orthopedic patient be asked to perform any exercise which is painful to him, but he

⁹Ibid., pg. 61.

¹⁰Larson and Gould, op. cit., pg. 417

¹¹Ibid., pg. 61.

should be encouraged to move his limbs through the limits of painless motion.¹²

A cast limits the patient's freedom of movement and interferes with his independence. It threatens his economic security by jeopardizing his job. The emotional problems make the patient's adjustment to his situation extremely difficult. It is very important to take care of the cast in order that the purpose for which it is intended may be fully realized. Care of the cast, however, is secondary to the care of the patient within its enclosure.¹³

The quality of nursing care given orthopedic patients by nursing personnel may in part be judged by the expertness of her observation. All members of the nursing team should remember that serious complications may result if the doctor is not notified immediately regarding symptoms of impaired circulation so that he can relieve the pressure.¹⁴

¹²William H. Thomas, "Postoperative Program for Patient Having Cup Arthroplasty," The Surgical Clinics of North America, W. B. Saunders Company, Vol. 49, No. 4, (August, 1969), pg. 786.

¹³Johnston, op. cit., pg. 418

¹⁴Mildred A. Mason, Basic Medical-Surgical Nursing, 2nd edition, (New York: The Macmillan Company, 1967), pg. 262.

Many patients require reassurance or emotional support as part of their care. In providing support the nurse herself is the functional agent. Support can be provided in five areas of experience: physical care; opportunities to express individuality; opportunities to progress at the patient's own rate; opportunities to identify, explore and solve problems and, too, the feeling of being cared for and understood.¹⁵

Understanding is a higher intellectual skill than knowing. To understand we must know, but we can know without understanding. . . The nurse must accurately observe behavior, correctly interpret its meaning, and be able to predict with some success how what she does will affect the patient's behavior¹⁶

Nursing personnel must have the necessary knowledge, judgment, and skills essential to render safe, efficient, and therapeutic care. In order to meet the needs of both patient and personnel, inservice education programs have been developed to meet the objectives of health care agencies and to improve patient care offered. Ideally the

¹⁵Barbara B. Kozier and Beverly W. Dugas, Fundamentals of Patient Care, (Philadelphia: W. B. Saunders Company, 1967), pg. 23-24.

¹⁶Ruth V. Matheney et. al., Fundamentals of Patient-Centered Nursing, (Saint Louis: The C. V. Mosby Company, 1964), pg. 51.

inservice educations program of any health agency is continuous and evolves as the needs of the patients and personnel change.¹⁷

Studies have been done which establish the importance of inservice education. Daniel Howland and Wanda McDowell reported in Nursing Research their study of measurement of patient care. The authors hypothesized that good patient care would be characterized by the ability of the hospital system to respond promptly and accurately to changes in a patient's condition relative to any of these variables while poor nursing care would be the reverse. They predicted that a high information environment would lead to better care.¹⁸

Why must there be a change in nursing and nursing care? There are four reasons Michael Annelo pointed out that have important implications for nursing:

1. demography--the vital and social statistics in application to health which are printed in magazines and newsprint across the nation

¹⁷Elda S. Popiel, "The Many Facets of Continuing Education in Nursing," The Journal of Nursing Education, Vol. 8, No. 1, (January, 1969), pg. 9.

¹⁸Daniel Howland and Wanda E. McDowell, "The Measurement of Patient Care: A Conceptual Framework," Nursing Research, Vol. 13, No. 1, (Winter, 1964), pg. 4-7.

2. the sophisticated technological economy
3. the shift in the labor force from unskilled labor in factories and on the farm to a population with a professional job
4. we live in a research oriented society--the use of federal funds to support research enterprises in order to discover or develop and bring in use new knowledge.¹⁹

Abdellah has stated, "a major deterrent to the measurement of quality in nursing is the lack of instrumentation to gauge it directly."²⁰

In recent literature Margaret Dunn developed a program for measuring nursing performance. Her goal was to assist in the development of the individual nurse based on an objective measure of her performance (not an evaluation flavored with the perceptions of the observer, and not an evaluation of general traits and broad area characteristics). Mrs. Dunn considered the needs of the nurse as individual and that her work performance was

¹⁹Michael Anello, "Responsibility for Change and Innovation in Professional Nursing," International Nursing Review, Vol. 16, No. 3, (1969), pg. 210.

²⁰Faye G. Abdellah "Quality Nursing Care," In Development of Personnel Toward Quality Nursing Care. Report on the (7th) annual Western Conference in Nursing Education, March 19-20, 1964. Boulder, Colorado. Western Interstate Commission for Higher Education, (1964), pg. 4.

directly related to meeting the needs of that individual. The purpose of the study was to develop and test an objective instrument that would make possible more efficient and effective analysis of the performance of the nurse practitioner in the clinical setting. The development of the instrument required an analysis of nursing behavior and of the relationship of these behaviors to the application of knowledge of nursing principles. The instrument was developed by task analysis of nursing performance of five nursing procedures. The five procedures were selected because they represented commonly performed procedures and were based on nursing principles which applied to many other procedures. A panel of experts in medical-surgical nursing helped by reviewing the instrument and in establishing the weights assigned to each behavior evaluated in each procedure. The weights provided the scoring method. Thirty-five professional nurse practitioners who had previously been scored on a Nursing Principles Test were observed by two supervisors performing the five selected procedures in the clinical care of patients. No relationship was found between the nurse practitioner's score on the test of knowledge and

theory of nursing and the observed use of nursing principles in the performance of nursing practice.²¹

According to Margaret Dunn,

The professional nurse practitioner needs both knowledge and skill to be successful. Where deficiencies in nursing skill and/or knowledge are identified, the supervisor is charged with modifying nursing behavior in accord with nursing principles which support effective practice.²²

Smith stated that standards for the nurse practitioner must be firmly established, "what is done, and why it is done."²³

The role of inservice education is to select learning opportunities for staff that help them develop their abilities to exercise self-control and self-direction and to seek assistance in unfamiliar circumstances.

According to Virginia Rockwell,

The mobility of nurses, their different backgrounds and experiences, the variations in types of educational preparations and the rapidly expanding

²¹Margaret A. Dunn, "Development of an Instrument to Measure Nursing Performance," Nursing Research, Vol. 19, No. 6, (November-December, 1970), pg. 502-510.

²²Ibid., pg. 504.

²³Dorothy M. Smith, Dean of the School of Nursing, University of Florida, Gainesville, Florida. A speech given at Providence Hospital in Labore Hall, Washington, D. C., Sigma Theta Tau, March 22, 1968.

realm of knowledge needed to practice at all--these facts underlie the need for strong inservice programs.²⁴

Whether for preparation of nursing auxiliary workers or for up-dating the knowledge of professional nurses, the main objective must be the ultimate improvement of patient care.

A survey sponsored by the National Academy for Health In-Service Education was conducted by Dorothy Kerr, a graduate nurse with experience in public health and training programs who is organizing the academy's effort to provide a forum for the exchange of information among health in-service people.

The National Academy for Health In-Service Education's first objective is in giving the learner a vitally important feeling of participation that goes to the heart of motivation. The academy has established several propositions for its existence in the following:

The purpose of the department is to improve patient care and increase employee satisfaction through preparation to assume increased job responsibilities.

²⁴Virginia T. Rockwell, "Better Patient Care Through Inservice Education," AORN Journal, Vol. 13, No. 2, (February, 1971), pg. 101.

To provide quality nursing service, the personnel who perform the service must be prepared to function with knowledge and skill in a climate which provides them with security and personal satisfaction. A well planned program of staff development contributes to the attainment of these goals.

Need to involve the staff in the learning process. We have to first find out what they want to know, not just what we want them to know. We believe that effective education must be developed from the needs of the participants, and that they should share their knowledge and think together.²⁵

Hospital in-service education has developed around four areas of personnel need according to Kerr:

1. orientation or introduction of the employee to his or her position and responsibilities and the environment in which he or she will function
2. training in manual and behavioral skills for specific task assignments
3. continuing education or helping the employee keep up to date with new concepts, increase knowledge and develop ability to analyze problems and work with others
4. staff development--meeting the employee's need for growth and preparing those who are qualified for leadership roles²⁶

Walter Hoefflin stated in an article in Hospital Management that "He who stops being better, stops being

²⁵"The Most Promising Manpower Resource in the Manpower That's Already There," Modern Hospital, Vol. 115, No. 4, (October, 1970), p. 91.

²⁶Ibid., pg. 93.

good. Strong, continuous inservice education helps people continue to grow at their jobs--helps them to be better."²⁷

The director of service is confronted by the dilemma of providing patients with nursing care characterized by continuity when the services of the nursing staff to provide that care are discontinuous. According to Myrtle Aydelotte, if one believes that nursing care is based on a sound clinical nursing base that is specific to the particular service, or groups of patients, one is forced to acknowledge that those who are charged with the responsibility for the quality of the care are also the ones who have knowledge that should be transmitted to others. The nursing department within an agency has acute educational problems. So much information must be given to nursing staffs to prepare them to function within a department. Even formal education cannot prepare a nurse for every eventuality. To quote Dr. Aydelotte in the following:

Both nursing career patterns (episodic and distributive) should be so organized that recognition, reward, and increased responsibility for

²⁷Walter R. Hoefflin, "To Have Better Personnel, Emphasize Training Programs," Hospital Management, Vol. 110, No. 8, (August, 1970), pg. 44.

practice are based on increasing depth of knowledge and demonstrated competence to perform in complex clinical situations.²⁸

Dr. Aydelotte further stated that the inability to define a unique body of knowledge and skill underlying nursing care persists. Nursing attempts to define its knowledge base in terms of processes, procedures, and techniques rather than to identify the content essential to nursing practice.²⁹

All staff development programs must ultimately lead to improvement of patient care through more effective use of employee potential. Her outlook will be broadened, her opportunity for exposure to other people, and the new knowledge obtained all help her contribute ultimately to the improvement of patient care according to Virginia Rockwell. As each individual becomes better able to function at the peak of her potential, contributions to the improvement of patient care increase. Because of individual variations, the time needed for developing one employee will vary from that of another.³⁰

²⁸Myrtle K. Aydelotte, "Gaps Between Service and Education," AORN Journal, Vol. 15, No. 6, (June, 1972), pg. 121-122.

²⁹Ibid., pg. 122.

³⁰Rockwell, op. cit., pg. 105.

According to Marilyn Neuman in-service education exists to ensure the provision of competent nursing care. She has listed three positive aspects of inservice education in the following:

1. Employees live up to, or down to, the expectations of performance that they believe their supervisors hold. Employee performance evidences the same degree of competency as that of the nursing care practiced in the clinical area. Inservice Education develops awareness of process of projecting standards through behavior.

2. By selecting learning content and method that reinforces the adult nature of personnel, inservice education assists employees to accept full responsibility for their actions. Employees who are consistently treated like adults, capable of independent judgment, are able to participate actively in their own continuing development by identifying their performance strengths and weaknesses and by selecting their own appropriate learning experiences.

3. By helping employees to learn work within the components of their job classification, to establish work priorities and time allotments for the priorities, and to plan to achieve these, inservice education helps personnel to be self-controlled and self-directed.³¹

Continued education fulfills the needs of the individual to help him or her to function efficiently in whatever capacity he or she is employed. The aim, according

³¹Marilyn M. Neuman, "Employee Competency: The Goal of Inservice Education," Nursing Clinics of North America, W. B. Saunders Company, Philadelphia, Vol. 5, No. 2, (June, 1970), pg. 342.

to Edith Maher, is to contribute to safe, therapeutic and effective care of all patients. Every employee's potential is developed so that he or she has a sense of participation. Individuals have a responsibility to seek and take advantage of the opportunities offered to them to help improve their knowledge, growth and development.³²

Inservice education exists for one reason only--to insure patients receiving a high quality of nursing care, through the education of the staff.³³

Marilyn Neuman further stated that if continued learning is blocked the result is a loss of self-renewal, and eventually job performance becomes the more repetition of functions that deprive the employee of the satisfaction of accomplishment.³⁴

As one can see there are two purposes served by inservice education. The one thought states that inservice education is for the betterment of nursing care--the patient being the only concern. The other sees the

³²Edith Maher, "Stature Not Status," Nursing Mirror, Vol. 133, No. 27, (December 31, 1971), pg. 7.

³³Mildred Tapper, "The Steps to Program Planning," AORN Journal, Vol. 9, No. 8, (August 1968), pg. 55.

³⁴Neuman, op. cit., pg. 345.

importance of personal growth and development of nursing personnel which directs the focus of self-actualization and self-esteem which ultimately reflects in nursing care.

The new accreditation standard of the Joint Commission on Accreditation of Hospitals, in the section on nursing, call for continuing training programs and educational opportunities for the development of nursing personnel. Perhaps the reason for the stress on the need for continuing education for nursing personnel is that the patient is under the constant care of these persons, from admission to discharge, and there is recognition that they must continuously review, renew, and update their knowledge and skill if quality care is to be provided to all patients.

If each department develops its own program then they can be scheduled according to its individual needs. What ever the system, whoever the planner, inservice education for every employee in every department in the hospital is vital to patient care. The growing demand of the public for an improved quality of patient care makes the hospital administrator realize that he must accept the responsibility of developing and maintaining a supply of highly motivated people within the institution by placing more emphasis on inter- and intra-departmental inservice education.

The American Hospital Association, in its Statement on the Role and Responsibility of the Hospital for Inservice Education states:

The hospital in discharging its responsibility for the quality of care rendered to patients, has the obligation to assure patients that those who provide service are competent to do so.³⁵

The new standards of the Joint Commission on Accreditation of Hospitals are very specific on the type of inservice training which a hospital must provide. The nursing standard states, "There shall be continuing training programs and educational opportunities for the development of nursing personnel."³⁶

The stipulation is that,

These programs should contribute toward staff development and toward the preparation of staff members for greater responsibility in nursing. . . . Educational resources from both inside and outside the hospital should be utilized. The total program should be under the supervision and direction of a qualified person. . . . The program should be evaluated periodically.³⁷

³⁵Sister Mary George Boklage, "Inservice Education Program Needed in All Departments," Hospital Topics, (March, 1971), pg. 35.

³⁶Modern Hospital (October, 1970) op. cit., pg. 94.

³⁷Ibid., pg. 94.

According to Alice Robinson,

Finding enough qualified nurses to staff a unit is usually impossible, so inservice education for newcomers is a must. It is also necessary for maintaining staff competence at a high level as machines and procedures change.³⁸

To the purpose specifically of a continuing inservice program according to J.C.A.H. states that the program should be designed to keep the nursing staff up-to-date on new and expanding nursing care programs and new techniques, equipment, facilities, and concepts of care. The program for continuing education should make use of opportunities out of the hospital.³⁹

The standards of the J.C.A.H. are also specific on continuing education for nursing personnel assigned to special care units:

A continuing education program developed specifically for the personnel of the unit must be provided in order to enable them to maintain and improve their skills, as well as to learn new techniques.⁴⁰

In 1960, Christena White, a master student of then Montana State College, surveyed the programs for inservice

³⁸ Alice M. Robinson, "Ongoing Inservice Programs Are a Must," RN Magazine, Vol. 35, No. 7, (July, 1972), pg. 51.

³⁹ Modern Hospital, (October, 1970), op.cit., pg. 94.

⁴⁰ Ibid., pg. 94.

education in selected hospitals in Montana. One of her purposes was to determine the extent and nature of inservice educational programs in Montana hospitals. She felt that she had found that there were inservice educational programs being carried out in Montana or at least a start had been made to initiate programs in hospitals throughout the state. She did not investigate the effect of the programs on nursing care concerning the patient or the nursing personnel.⁴¹

Determining the needs of interests of nursing personnel can be determined through interviews, group meetings, questionnaires, reports and records, and job analysis. First find out what the employee already knows. Observe her doing a particular task or procedure she says she knows. Find out what the employee is expected to do on the job and the condition under which she does it. Content of an inservice program is based on the objectives which are based on the needs.⁴²

⁴¹Christena S. White, "A Survey of Programs for Inservice Education in Selected Hospitals in Montana," Masters Thesis, (April, 1960).

⁴²Tapper, op. cit., pg. 55.

Chapter 3

METHODOLOGY, OBJECTIVES AND ANALYSIS OF DATA

Methodology

A descriptive study, using a prepared questionnaire and test, was conducted involving nursing personnel from five selected hospitals in Montana. In order that inservice education programs can be improved and utilized to their greatest potential in patient care and personnel satisfaction this study was conducted to determine present time nursing care on orthopedic units. If both the learning needs of the patient and nursing personnel are to be met by the health institution the quality of nursing care must first be identified. If nursing personnel are to be recognized as being capable, responsible staff members their potential can be established through cooperative programs.

Elda S. Popiel wrote an article on the interest in continuing education in nursing. On the facet of inservice education Ms. Popiel stressed the individuality of an inservice program and that it is not handed out like medicine or given in the same dosage and frequency to everyone. An inservice education program is not planned

for large group distribution but rather as Popiel stated in the following:

. . . it is prescribed according to indicants revealed by inventories that consider the varying educational levels of the workers, their roles, and their responsibilities in the agency. The capabilities and potentials of the personnel and the needs problems of the patients must be considered fully . . . what the nurse should know to meet the needs of patients is given the greatest priority.¹

Following through with the priority established, the questionnaire was designed to determine general background information about the participating personnel. The first four questions sought information about age, sex, position, and educational background. The next questions dealt with work experience; length of time having worked on an orthopedic ward, experience in orthopedic nursing in a setting where there was no defined orthopedic ward; and length of time having worked on the present orthopedic unit. The investigator was also interested in any special training in orthopedic nursing, from whom had they gained knowledge of orthopedic nursing, benefits from inservice education classes in the past, and areas in which participant wanted covered in inservice classes. The last

¹Elda S. Popiel, "The Many Facets of Continuing Education in Nursing," The Journal of Nursing Education, Vol. 8, No. 1, (January, 1969), pg. 7.

questions were personal identification and definition questions: confidence in the care of the orthopedic patient, whether the participant believed the orthopedic ward to be a specialized nursing care unit and finally, the participant's definition of orthopedic nursing care.

The test was devised following a study of orthopedic nursing care. Areas were defined to establish basic nursing care which involved the care of orthopedic patients. Questions asked were multiple choice questions, true-false questions, completion, matching, and diagram questions. Each question in the multiple choice section was given the number of answers wanted in order to benefit personnel who had not taken tests for a period of time.

The investigator consulted Nancy A. Brunner's Orthopedic Nursing--A Programmed Approach; Carrol B. Larson and Marjorie Gould's Orthopedic Nursing; Samuel L. Turek's Orthopaedics Principles and Their Application; and Peter Viek and Carole A. Mancuso's Guide to Hospital Orthopaedic Practice as subject specialists in determining orthopedic nursing care. Two orthopedic specialists, Thomas C. Power, M. D. and Paul Melvin, M. D., were consulted in personal interviews for their knowledge of essential orthopedic nursing care.

The following is a discussion of orthopedic nursing from Larson and Gould's Orthopedic Nursing which establishes a basis for the essential nursing care questions asked in the test.

Good posture exists when the body alignment is such that the musculoskeletal system of the body can function with efficiency and with a minimum of energy. Good posture provides for correct functioning of the weight-bearing joints. It lessens the possibility of strain to joints and ligaments by preventing uneven distribution of body weight. When posture is good, muscular work to maintain balance is kept at a minimum resulting in less muscular fatigue and strain. Good posture requires that the body weight be in balance in relation to the spine and the center of gravity which is the point around which all parts of the body exactly balance each other. In moving a patient the nurse is able to increase the force applied to the movement by using her own weight to assist in accomplishing the sliding movement of the patient. By sliding the patient the nurse utilizes the pull of gravity rather than working against it. She does this by separating her feet, to provide a wider area of support for stability, with the forward foot pointing in

the direction of desired movement. In this way the nurse uses the strength of all the large leg and thigh muscles in performing the motion, thus avoiding strain on arm, shoulder, and back muscles. The work is further shifted to the long, strong muscles of the thighs by flexing at the knees and hips while keeping the back in straight alignment.

To preserve the efficiency of a cast and, at the same time, to maintain the patient in cleanliness and comfort takes ingenuity on the part of the nurse. No one way of caring for these patients can be specifically defined in the procedure book. Safeguarding the efficiency of the cast (that is, its ability to maintain the position for which it has been applied, over the period of time necessary for the accomplishment of the doctor's purpose) is the nurse's responsibility. One thing she must understand is that a patient's complaint even though it might seem trifling must receive her prompt attention.

Nurses are warned repeatedly about the dangers of impaired circulation in an extremity upon which a new cast has been applied. Inspecting fingers or toes when a cast has recently encased the extremity is as important as taking a pulse after an operation. Circulatory impairment is as important to watch for as are signs of hemorrhage.

The physician must be immediately notified if the pulse in an encased limb is not present. Symptoms of coldness, pallor, cyanosis, edema, loss of motion, numbness, pain, and a slow return of blood to the part on blanching are cardinal. The extremity must be watched for many succeeding days for a patient in apparently good condition after the application of the cast does not warrant security that all is normal.

Care of the cast is also important in considering the patient's recovery. Pillows should be ready to support the wet cast. They need to be pliable and easily adjusted to the contour of the patient's body. Under no circumstances is the damp cast to be lifted directly onto the hard bed when the patient is returned to his room. One of the chief causes of pressure sores in orthopedic patients is allowing an incompletely set cast to lie unsupported on a hard surface. The cast will become flattened over the bony prominence, particularly the back of the heel and sacrum, and damage to the underlying soft tissues will be unavoidable.

The patient in a new cast is turned usually by the evening of the day the cast is applied unless contraindicated by the physician's orders. This is done

primarily for the comfort of the patient and also so that the cast may dry on its posterior surface. Turning should always be done on the side not enclosed in plaster or toward the side that has not been operated upon.

Careful observation is necessary in caring for the patient in a cast. All visible skin must be inspected daily for signs of abrasions or irritation. All areas that come in contact with cast edges must be particularly watched for cast sores are very frequently encountered at these places. Fingers moistened with a small amount of alcohol should explore under the cast as far as it is possible to reach. If beginning abrasions or skin blemishes are noted, they should be inspected frequently during the day. Nurses should learn to inspect casts with the sense of smell as well as with the senses of sight and touch. She must get her nose down to the plaster and learn to smell discerningly. It takes experience to learn to detect abnormal odors, but to locate the exact position of a musty odor may be the only evidence of a sloughing area beneath a cast. It is sometimes possible to detect an underlying pressure sore by the temperature of the cast, for the cast tends to become

much hotter over an area that is beginning to discharge. Eyes, nose, and fingers are of equal importance in cast care.

Larson and Gould also present traction and nursing care of the patient in traction. If the nurse understands the purpose of the traction and its working principle she will be able to care for the patient with greater efficiency and confidence. The application of traction means that a pulling force is applied to an extremity or a part of the body. Skin traction is applied to the skin and soft tissues and therefore indirectly to the skeletal system. Traction tapes which adhere to the skin surface are commonly used. Skeletal traction is applied directly to the skeletal system. The Steinmann pin or Kirschner wire is used in applying traction to an extremity. Manual traction means the application of traction to an extremity by hands of the operator. Occasionally, when nursing care is being given or when traction is changed, it is necessary to apply this type of traction to a part of the body.

Traction may be applied to the extremity of a patient with a fracture, first to lessen the muscle spasm and to reduce the fracture and then to immobilize and to maintain the correct position. The patient with arthritis

who has flexion contractures of the hip and/or the knee may have traction applied to correct or prevent the development of these deformities. The child with scoliosis may have traction as a form of treatment to lessen the deformity. Occasionally, the patient with back pain may be placed in traction to relieve muscle spasm, or traction may be applied to lessen muscle spasm about a joint.

Unnecessary restriction of motion may cause aches and discomfort or actual numbness that might be avoided by allowing the patient such body activity as is compatible with good local immobilization of the affected part. In caring for patients in traction the nurse is to remember that traction cannot be released for any nursing procedures except on the explicit order of the physician in charge. Any friction created by ropes riding on the foot of the bed, ropes impinged by bedclothes, or heels digging into the mattress will lessen the efficiency of traction greatly.

Provision for countertraction must always be made if effective traction is to be maintained. Countertraction means a pull exerted in the opposite direction of the pull produced by the traction apparatus. This can be obtained when the traction pull is exerted against a fixed point, or by elevating the bed under the part that is being placed

in traction. Sufficient countertraction prevents the patient from sliding toward the foot of the bed, when traction has been applied to the lower extremity.

Nursing care must provide for good hygiene practices for the patient in traction. Larson further explains how to bathe the patient in traction. The patient is bathed over the anterior surface of the body first; then with the aid of a trapeze, the patient can lift his shoulders off the bed, enabling the nurse to bathe and care for the upper portion of his back. To bathe the buttocks and sacral area, the assistance of a second nurse is needed to help the patient lift his hips off the bed. The patient, by flexing his uninvolved hip and knee, pushing with his foot on the mattress as he pulls on the trapeze with his hands, is usually able with the assistance of the second nurse to lift his buttocks off the bed. This makes it possible for the first nurse to complete the back care and to change the bed linen. Without explicit permission weights are never removed at any time during the nursing care given these patients. The damage that can be done in fractures of the extremity by removing the weights may be almost immeasurable.

Perhaps a brief explanation of some of the more extensively used types of traction would be helpful in presenting the section on traction. Buck's extension, rubber surface traction, and Bryant traction are all straight or running traction which exert a pull on the affected part but do not provide a balanced support by means of a hammock or splint. With Russell traction, suspension traction and Dunlap traction, the extremity has traction applied and is then supported by means of a hammock or splint held in place by balanced weights attached to an overhead bar. Head traction, pelvic traction, and ankle traction are applied with a fitted apparatus.

The problem of pressure sore prevention is the responsibility of the nurse. She must recognize that trauma of any nature that endangers tissue makeup is a great factor in the production of skin breakdown. The orthopedic patient is especially subject to decubitus ulcers as he is more often than not prevented from moving about either in his bed or in the unit. Pressure areas go through certain well defined stages and it is the nurse who can recognize the first stages and institute measures to prevent a long healing battle with an extensive pressure

area. The first stage of redness will usually be accompanied by the patient's complaint of a hot burning pain at the site involved. After a day or so the initial reddened area may cause the patient little pain as the sensory nerve endings in the skin become paralyzed. The redness in the area may take on a purplish cast which will not disappear upon blanching. The skin may break because of an almost undetectable vesicle formation. Unless this progression is checked, ulceration may follow, and the denuded area may become the source of secondary infection.

Fundamental to all treatment is removal of pressure. Permission may be given to turn the patient to his side for short periods to relieve pressure on the sacral area. A brisk rubbing to restore circulation to the threatened area can be given if it is not so vigorous as to endanger the skin. Sponge-rubber squares or squares of unclipped sheepskin are often effective in preventing the progress of pressure areas if they are used in the first stages.²

²Carroll B. Larson and Marjorie Gould, Orthopedic Nursing, 7th edition, (Saint Louis: The C. V. Mosby Company, 1970).

In summary, the nursing care of the orthopedic patient consists of the following step and subsequent key points:

Table 1
Cardinal Symptoms For The Orthopedic Nurse

PRINCIPAL STEP	KEY POINTS
1. Cardinal symptoms for the orthopedic nurse to be aware of and observe for are:	1) a. Pain b. Color--cyanosis, c. anemia, or blanching Swelling d. Depressed local temperature e. Diminished sensation f. Loss of motion g. Sudden elevation of temperature which cannot be accounted for

Four areas of essential orthopedic nursing care were determined as the following: (1) application of the principles of body mechanics for both the patient and the nurse; (2) traction, its purpose, importance for frequent observations of traction equipment, and care of the patient in traction; (3) care of the patient confined in a cast, problems that can be avoided and observations made by

nursing personnel; and (4) turning the patient following surgery or application of a cast.

Both the questionnaire and test were reviewed by the clinical member of the investigator's graduate committee, the head nurse of the orthopedic unit of the first hospital in which the study was done, and two graduate student classmates. The review was done to evaluate for clarity and understanding of the questions. In the final revision no changes were suggested by those participants in the pilot study for either the questionnaire or the test questions.

In the first hospital the head nurse, through the suggestion of the Director of Nursing, cooperated with the investigator in choosing the participants and handling the forms. Twenty nursing personnel were participants in completing the questionnaires and the tests. In the second hospital after a discussion with the Director of Nursing to promote her understanding of the study, cooperation was received in carrying out the study within the hospital. Twenty questionnaires and tests were given, completed by the participants and again collected by the Director of Nursing.

A letter was sent to the Director of Nurses in two hospitals of the second large city, requesting an

appointment for a personal interview. The appointments were accepted and again full cooperation was received in the Director choosing the personnel and in seeing that the forms were completed. Twenty forms were given to each Director and thirty-nine were received again in the mail by the investigator.

In the fourth hospital, the size of the orthopedic unit was smaller than the four previous units which were approximately the same patient capacity, but acceptable for the study.

The Director of Nursing was notified via phone and after receiving information of the study, her cooperation was given. Eight forms were completed by the selected personnel and returned to the investigator.

Of the one hundred questionnaires and tests received from the five hospitals, the investigator was not able to use twenty-five of the forms as they were not completed sufficiently for the study. The remaining seventy-five forms were accepted and analyzed for the study.

Before each hospital returned the forms they were given permission to use the questionnaires and tests as they could best be utilized to improve patient care. The investigator coded the forms so in that an identification

could be made in paralleling the questionnaire with the test while maintaining the anonymity of the respondent. For example, the participant who filled out number one questionnaire could be identified as having filled out number one test. Even though both were completed at the same time, they were separate forms.

As no identification of hospitals was made on the questionnaire no comparison between hospitals and orthopedic units can be made. This was explained to the Director of Nursing of each hospital before the study was accepted and cooperation was received.

The analysis of the results was made by combining all the forms and separating the components according to personnel position.

Objectives

1. To determine whether nursing personnel on orthopedic units in five major hospitals in Montana have received specific training in the nursing care of orthopedic patients.

2. To define orthopedic nursing care as identified by nursing personnel on the five orthopedic units.

3. To direct attention from test results to basic procedures and principles of orthopedic nursing care not being recognized and practiced by nursing personnel at the level of their education and training.

4. To direct attention to those principles and procedures which prove the necessity for further instruction and guidance.

5. To accept from nursing personnel their recognition of deficit areas which could be strengthened by further education.

Analysis of Data

It was determined by the investigator from the analysis of the seventy-five returned questionnaires and tests the need for an inservice education program in orthopedic nursing care. The average time personnel in the four positions have worked on their present orthopedic unit is two years indicating a high rate of personnel turnover. Although the personnel stated they felt confident in their work experience, changes in procedures and techniques demand classes to keep them working efficiently. The following list is a partial one of the responses which

were obtained from question nine of the questionnaire. The question dealt with areas the personnel wanted to be included in an inservice program.

1. New surgical procedures and post-operative follow-up.
 2. Turning and alignment of patient.
 3. Setting up and applying traction and countertraction.
 4. Patient comfort measures.
 5. Emotional support for the restricted patient.
 6. Use of the circle beds and infa-lifts.
- General orthopedic nursing care review.

The nursing personnel in response to question seven of the questionnaire, which dealt with who had helped them most, stated that they had received the most help in their work experience from first their co-workers, then the head nurse, the physician and other being identified as books, and periodicals.

In the four areas of orthopedic nursing which were identified, nursing personnel qualified in the lowest percentile in the areas dealing with traction and cast care. In the block of scores registering between zero and fifty-nine, Table 2 shows the distribution of these returns to include all four positions in the personnel who had not

had any special training. Special training was identified as inservice education classes, workshops and training while in a branch of the armed services. Test scores as presented by graphs show a marked distinction between results of personnel having special training and those who had not. Personnel who had special training overall have better test results showing their understanding of basic orthopedic nursing care. The test scores show that in the categories identified by traction and cast care there is a significant lowering of test results in all four positions.

In the graphs following the results for each question of the test is presented. The question is stated at the top of the page with the correct answers identified either by an asterisk, written in the space provided or by the correct letters. For the multiple choice questions, the number of answers sought are identified to the right of the question.

1. The purpose of orthopedic nursing is the maintenance or restoration of proper body mechanics by: (3)-correct answers

- *(a) maintaining normal range of joint motion
- (b) maintaining fluid intake
- *(c) functional positioning
- *(d) correct body alignment

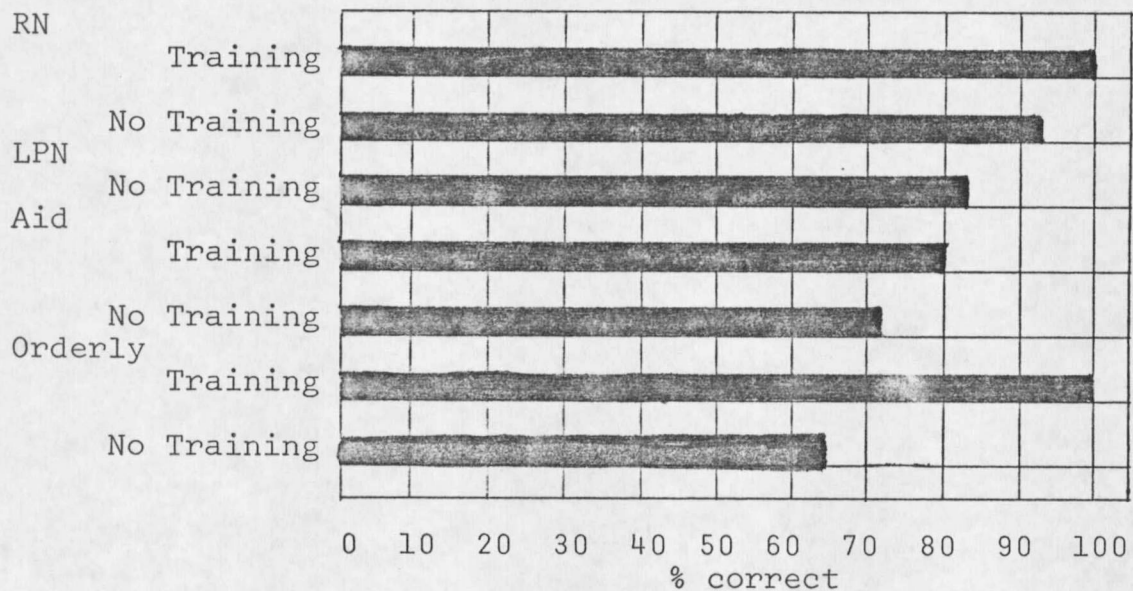


Figure 1

Graph of Question 1

There is no significant difference in the test results between personnel who had special training and those who had not except in the Orderly position. Test results had a 34% range difference in this area. Orderlies who had had training in orthopedic nursing care scored higher on the test question than those who had not had training.

2. The application of the principles of body mechanics involves

(1)-correct
answer

- (a) the patient
- (b) the nurse
- (c) the bed
- *(d) both the patient and the nurse

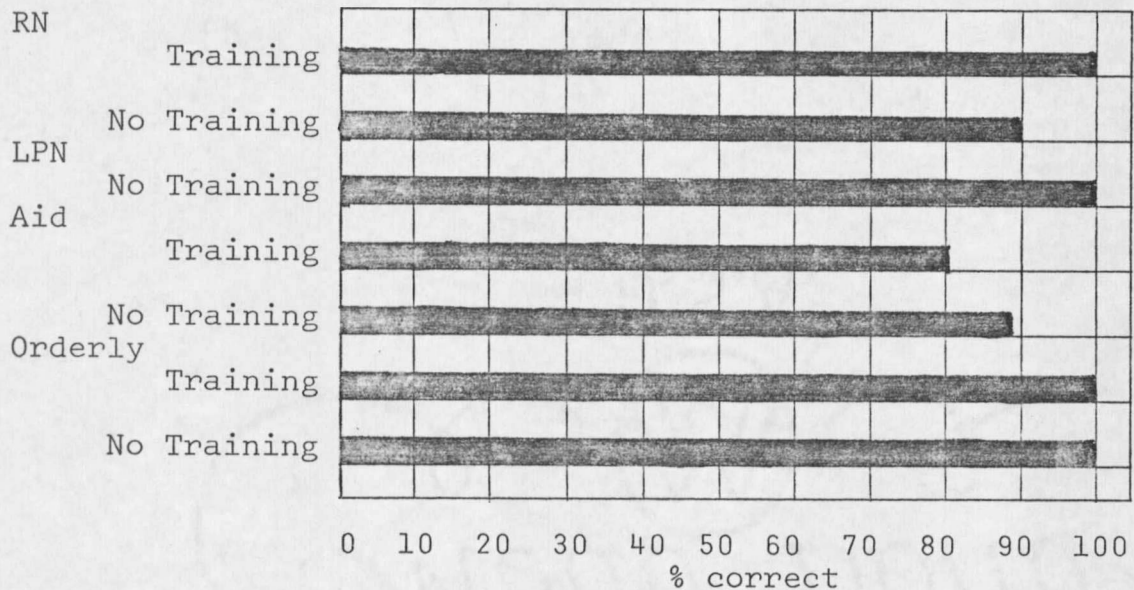


Figure 2

Graph of Question 2

No significant difference in test results can be noted in any of the positions.

3. The purpose of traction is to

(3)-correct
answers

*(a) immobilize an extremity

*(b) lessen muscle spasm

(c) make the patient much more comfortable

*(d) reduce a fracture

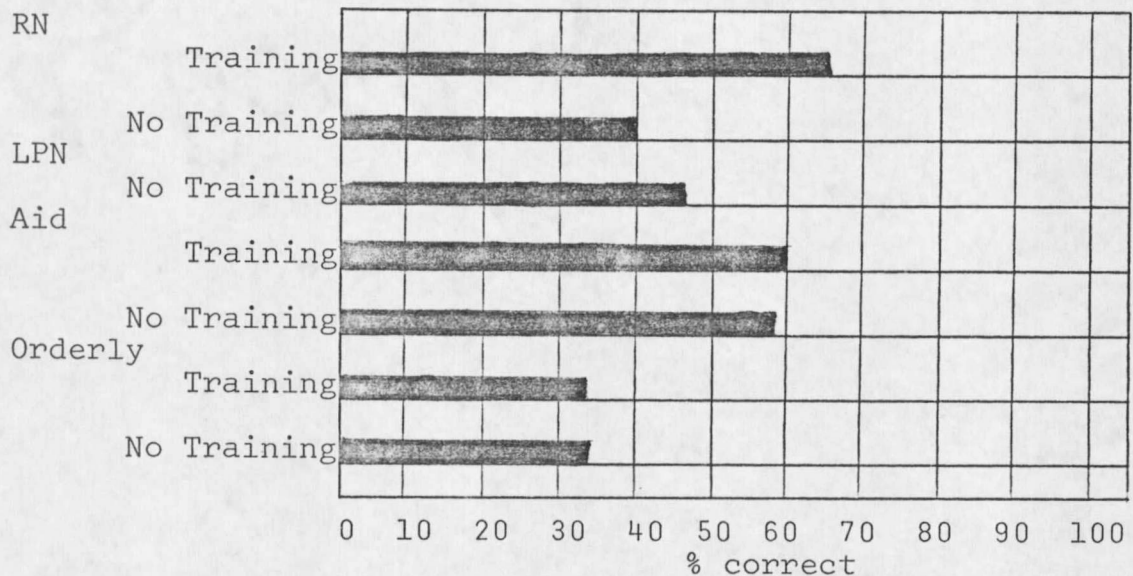


Figure 3

Graph of Question 3

There is significant difference in test results between the R. N.'s who had received special training and those who had not. Those who had training scored higher on the test results. Note the results that fall below the 60% score for understanding basic nursing care.

4. The nursing care of a patient in traction includes frequent observations of the traction equipment. Purpose of traction will be reduced by (3)-correct answers

- *(a) friction created by ropes riding on the foot of the bed
- *(b) ropes impinged by bedclothes
- *(c) heels digging into the mattress
- (d) the patient's legs in contact with the bed

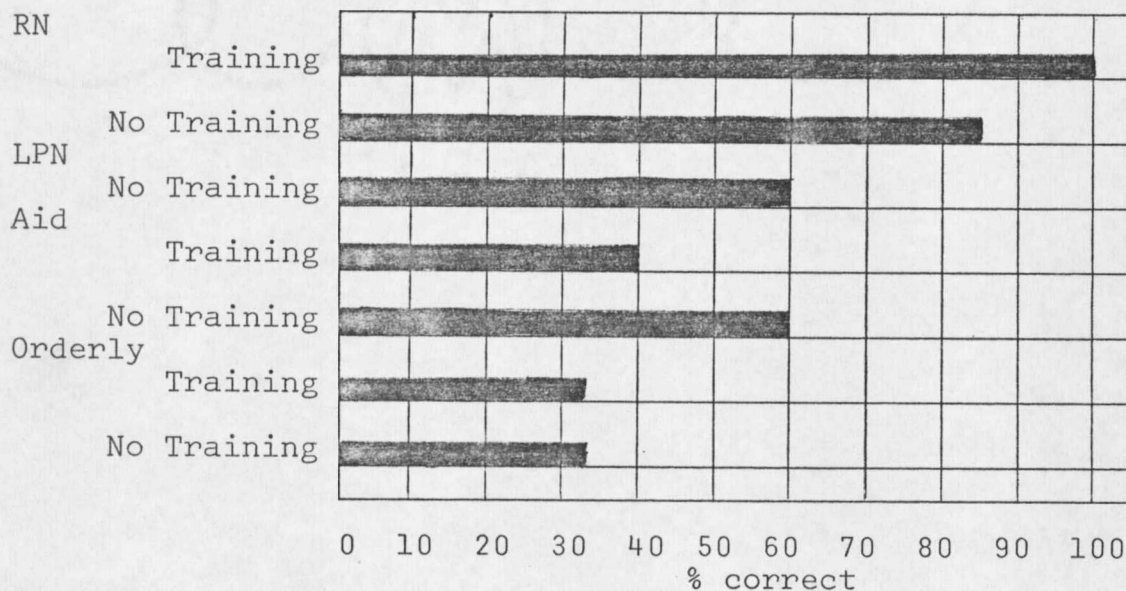


Figure 4

Graph of Question 4

Significant difference in test results between the R. N.'s who had received special training and those who had not. Those who had training scored higher. Personnel in three categories score below 60% in failing to understand purpose of traction.

5. In caring for a patient in a cast, certain observations must be made. The nursing personnel checks the cast and the patient

(3)-correct answers

- (a) to determine if the cast is too heavy for the patient
- *(b) for a musty odor which may be evidence of a sloughing area beneath the cast
- *(c) by feeling and looking for skin irritations at the cast edges
- *(d) for swelling or discoloration of the toes

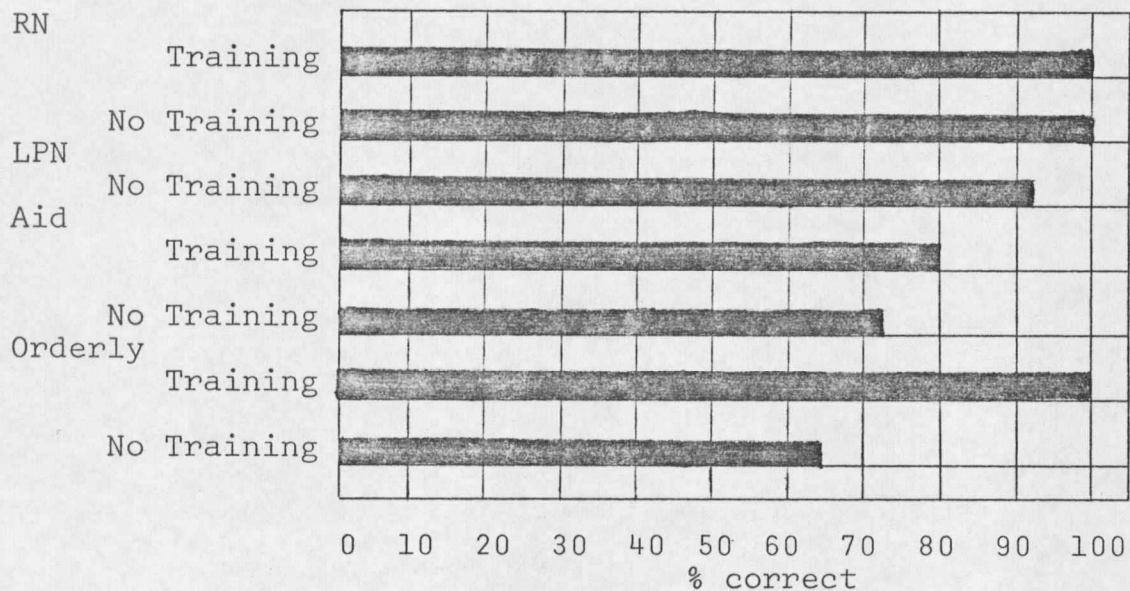


Figure 5

Graph of Question 5

Significant difference in test results for observation of the patient in a cast noted for the Orderly position; those who had training scored higher.

6. What criteria do you judge when to notify one in charge or the physician when a cast is causing a problem?

- *(a) pain (3)-correct answers
- (b) general discomfort of the cast
- *(c) pallor
- *(d) numbness or paralysis

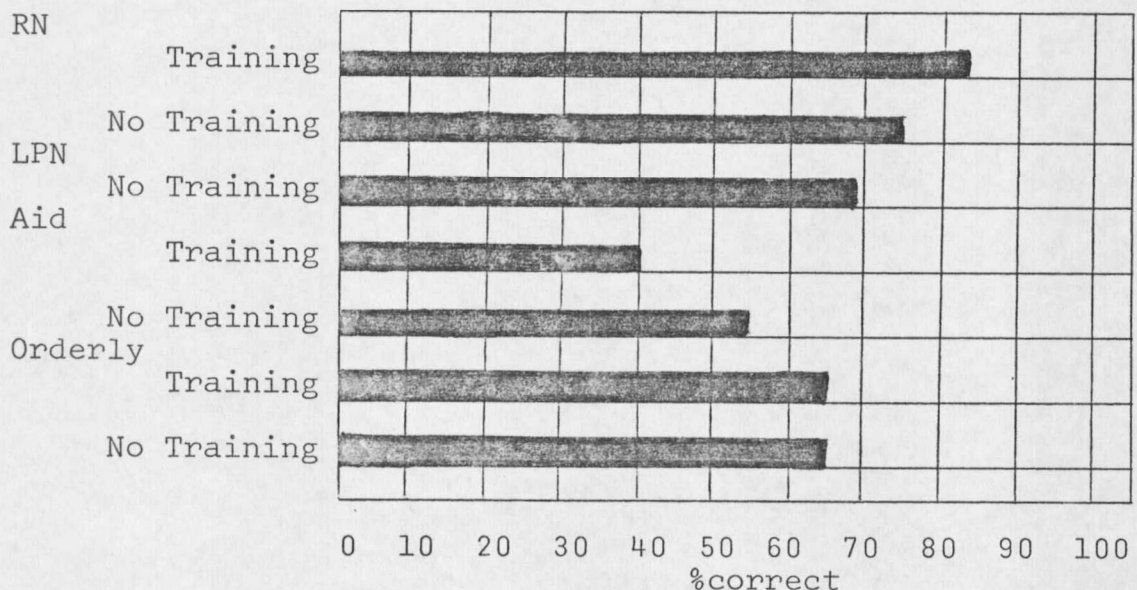


Figure 6

Graph of Question 6

No significant difference for comparison of the four positions can be noted. The Nurses Aides fall below the 60% score for understanding criteria for cast care.

7. What particular motion must be avoided in caring for a patient post operative prosthetic hip surgery?

(Posterior approach)

(3)-correct
answers

- *(a) flexion
- *(b) internal rotation
- *(c) adduction
- (d) abduction

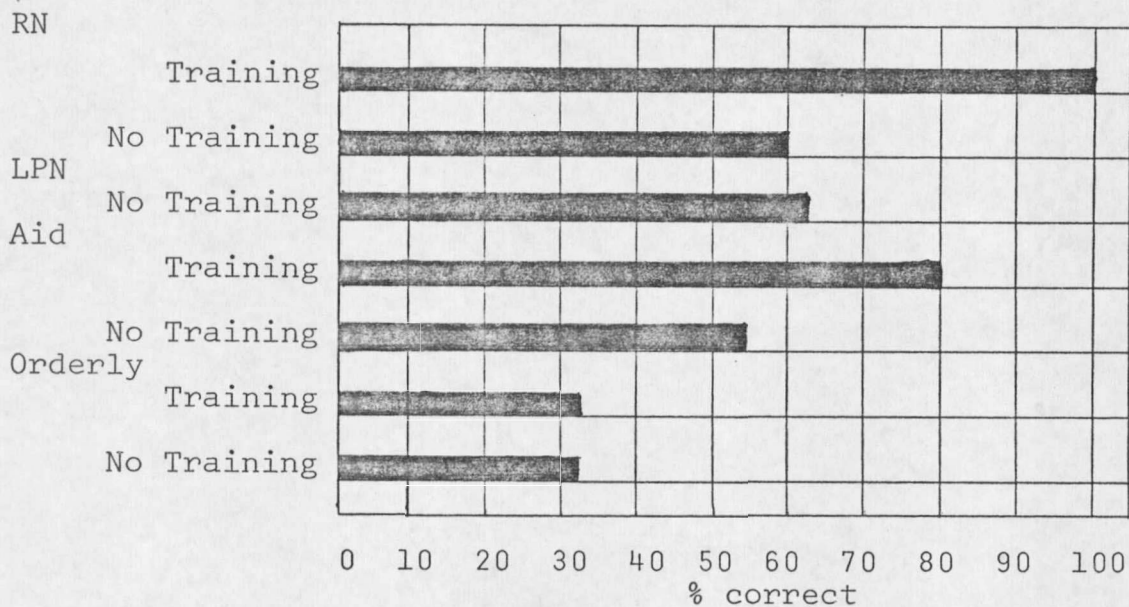


Figure 7

Graph of Question 7

Significant differences can be noted in the test results for special training versus no training in both the RN and Nurse's Aide positions; those who had training scored higher. Note the Orderly position for both categories falls below the 60% score for understanding positioning principles.

TRUE--FALSE QUESTIONS 8 thru 13

Answer either true or false in the blank to the left of each question

8. T The application of traction means a pulling force is applied to an extremity or a part of the body.

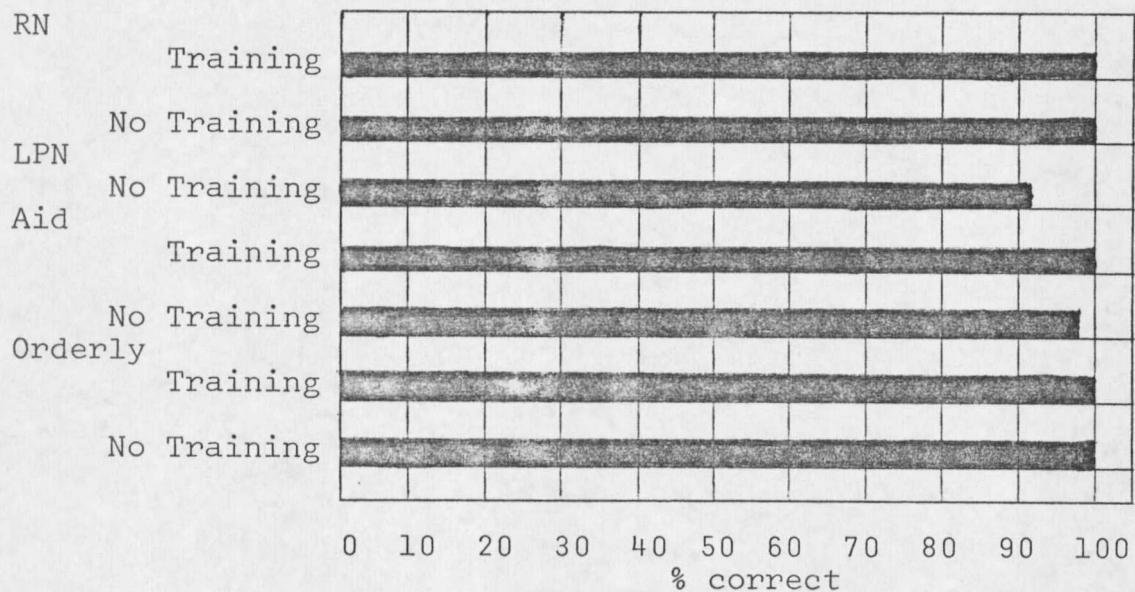


Figure 8

Graph of Question 8

No significant difference can be noted in the four positions. Test results show no marked differentiation in scores between special training or no training.

9. F Even a sufficient countertraction will not prevent the patient from sliding toward the foot of the bed when traction has been applied to the lower extremity.

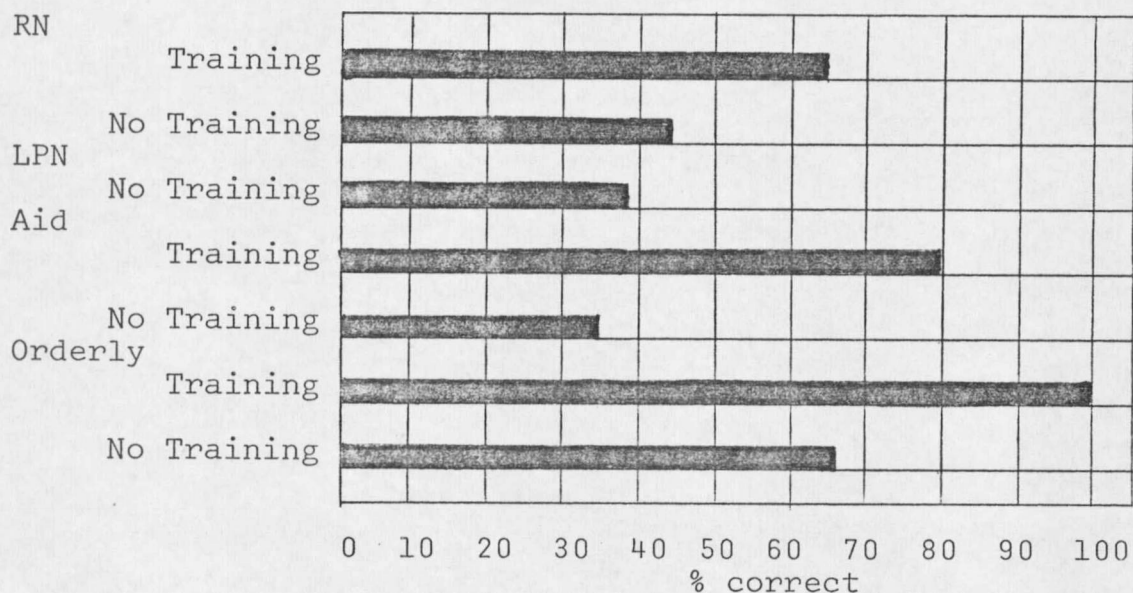


Figure 9

Graph of Question 9

Significant score results in the three positions for comparison. Personnel having had special training show a marked differentiation in their score results. Personnel may have answered according to their own observations.

10. F In bathing a patient with a fractured femur who is in traction the weights may be removed in order that the nursing personnel may much more easily bathe the back and buttock area.

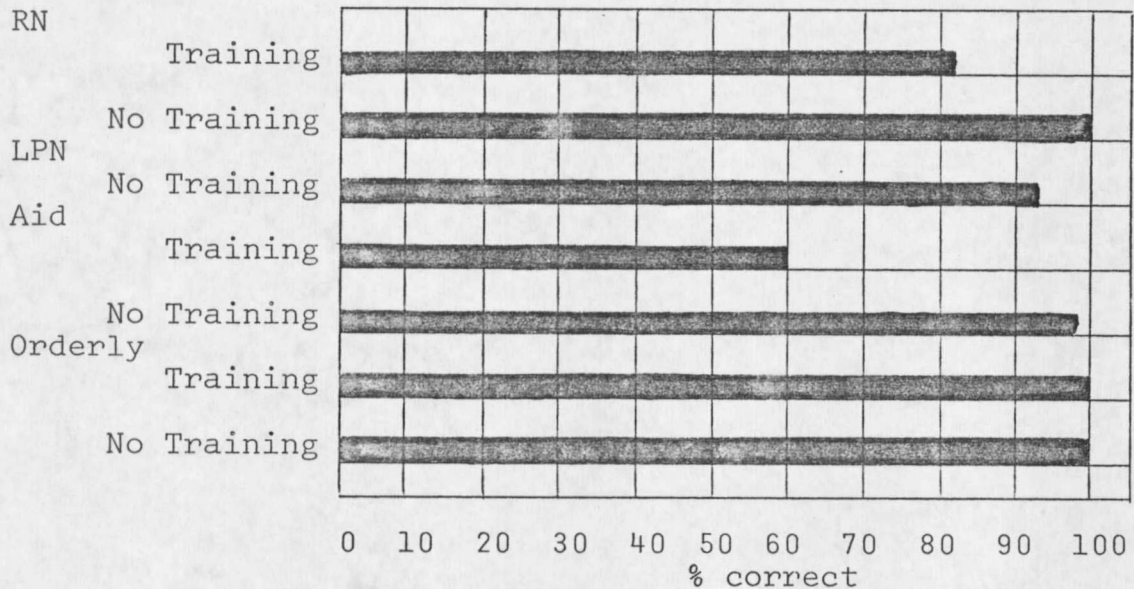


Figure 10

Graph of Question 10

Note the test score results between those who had special training and those who had no training. Those R. N.'s and the Nurse's Aides scored higher who had no special training.

11. F An infrequent cause of pressure sores of orthopedic patients is allowing an incompletely set cast to lie unsupported on a hard surface.

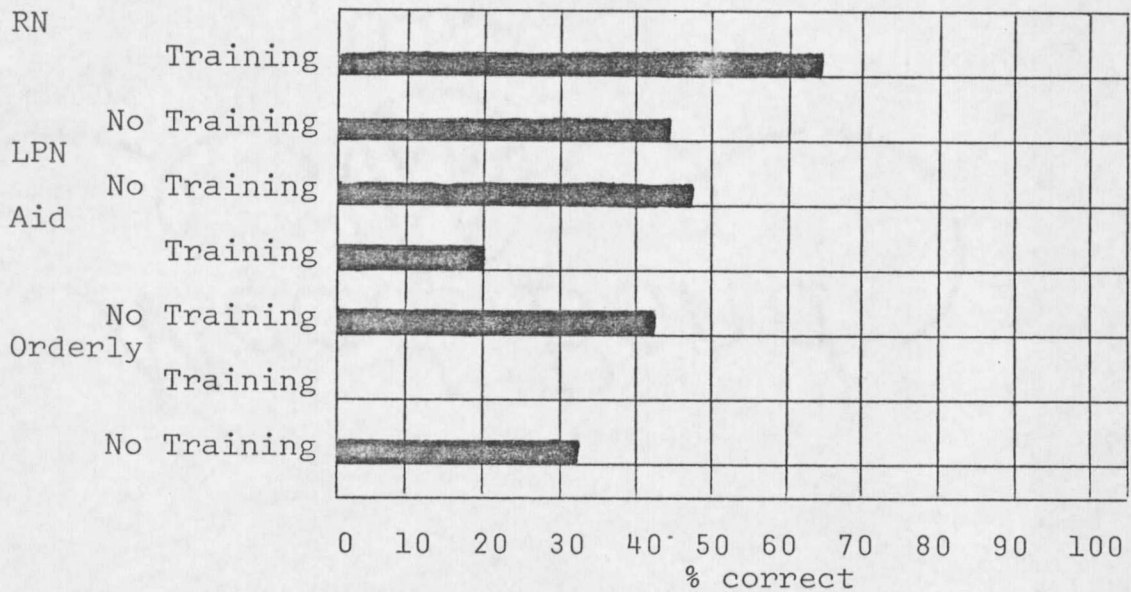


Figure 11

Graph of Question 11

Significant results in that the nursing personnel fall below the 60% score for understanding basic nursing care of the patient in a cast.

12. T A cast tends to become much hotter over an area that is beginning to discharge

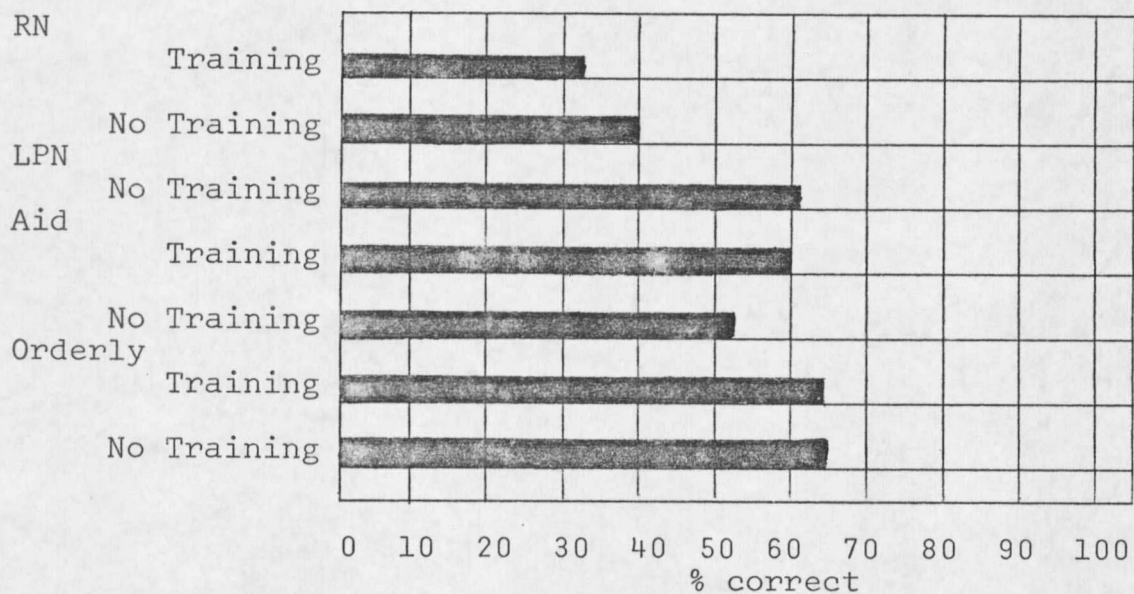


Figure 12

Graph of Question 12

No significant difference noted in the score results for any position. Note the results falling below the 60% score for understanding basic nursing care of the patient in a cast.

13. T Unless specified by the physician turning should always be done on the side not enclosed in plaster or toward the side that has not been operated upon.

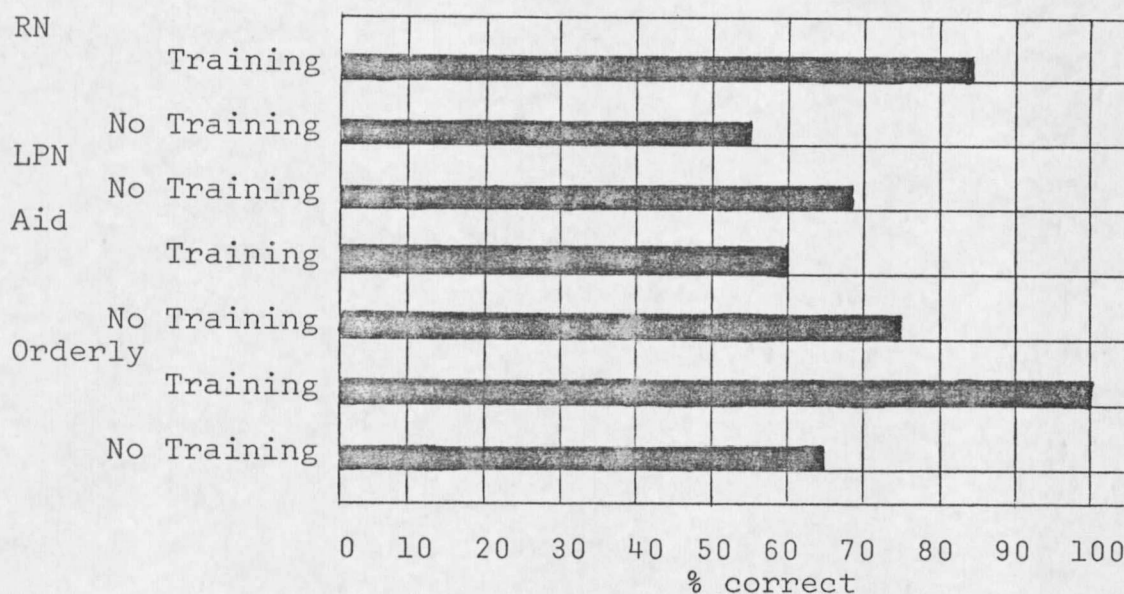


Figure 13

Graph of Question 13

Significant difference in test results of personnel who had special training versus those who had not in two positions; those who had training scored higher.

FILL IN THE BLANK QUESTIONS 14 thru 16

For each question place the word or words in the blanks provided.

14. In washing the patient's back close observation should be paid to the sacral area which is an extremely vulnerable spot that must have constant care to prevent breakdown of the skin.

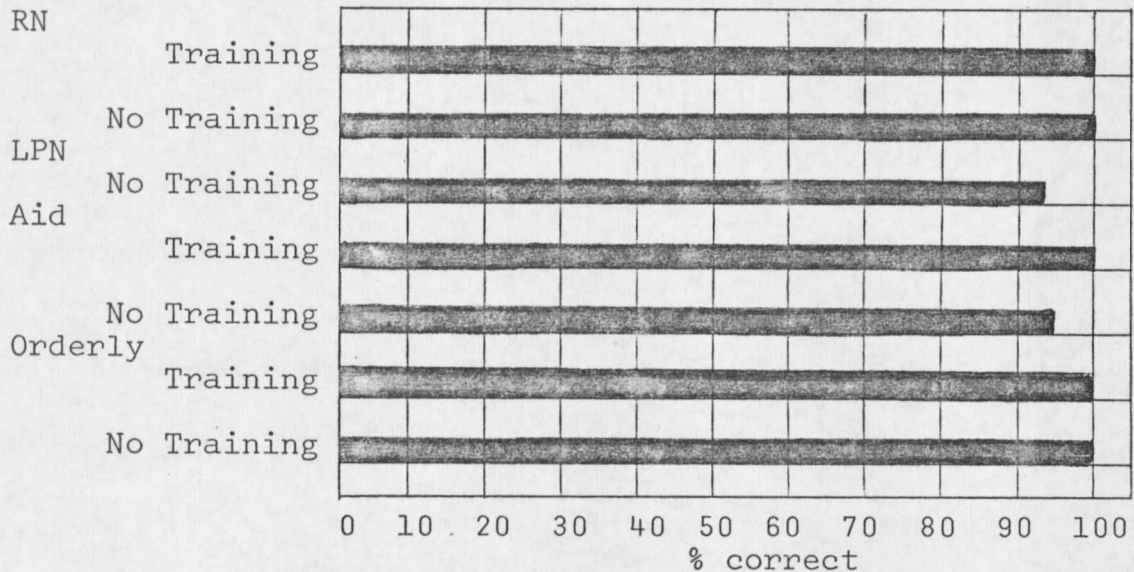


Figure 14

Graph of Question 14

No significant difference noted in the test result of any position concerning basic nursing care of the restricted patient.

15. In caring for a patient that must be log rolled to turn from the back to the left side what four placements of pillows would you use for greatest comfort and body alignment for the patient? between the legs, back, head, and buttock.

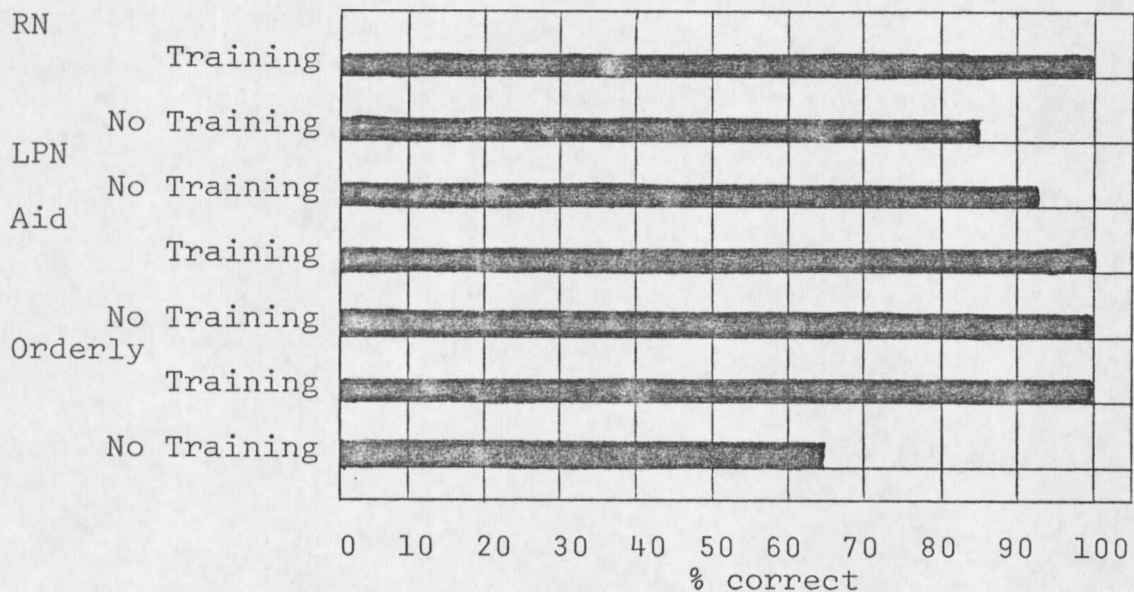


Figure 15

Graph of Question 15

Significant difference noted in tests results of personnel who had special training and those who had not in two of the positions; those who had training scored higher.

16. What time period is most critical after a cast has been applied for checking for swelling, discoloration, and numbness? 24-48 hours

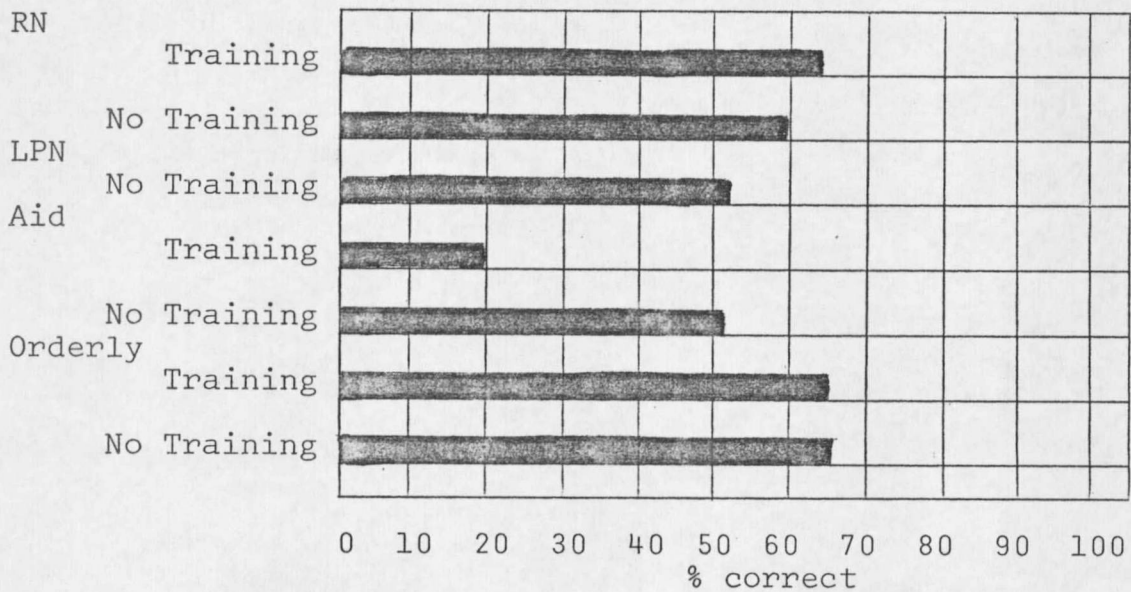


Figure 16

Graph of Question 16

Significant difference noted between Nurse's Aides who had no training and those who had special training; those who had training scored higher on the test results. All results fall close or below the 60% score for understanding basic nursing care of the patient in a cast.

MATCHING QUESTIONS 17 thru 22

For each term in column A place the definition's letter from column B in the blank to the right of the term. See Appendix B, page 99.

17. c Adduction - motion toward the midline of body

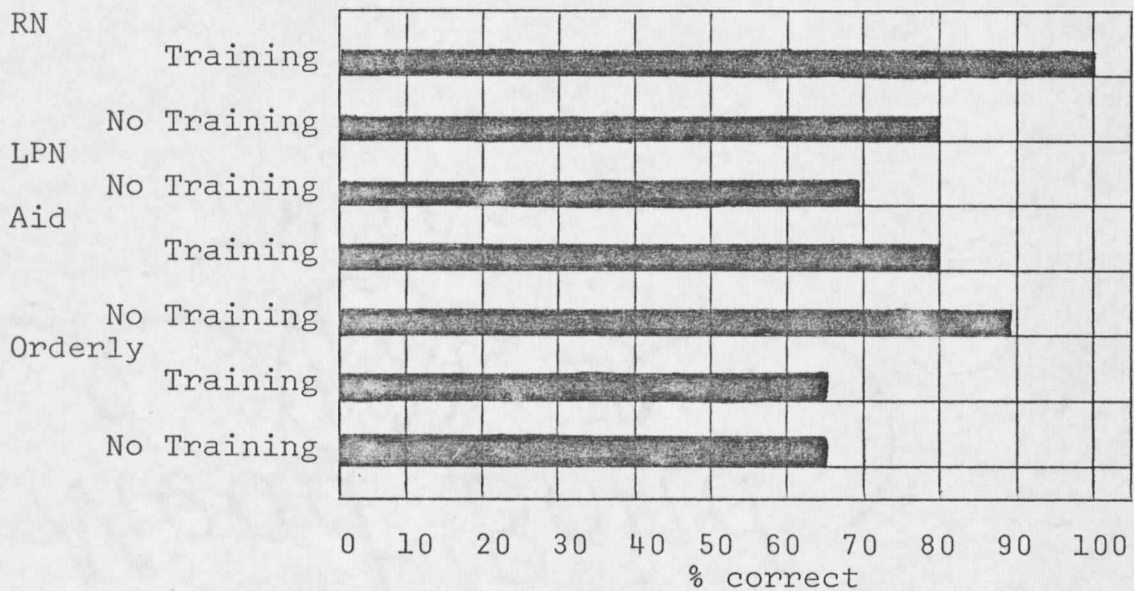


Figure 17

Graph of Question 17

Significant difference noted in test results for the R. N.'s who had special training. Those who had had training scored higher than those who had not received special training.

18. d Extension - motion of straightening

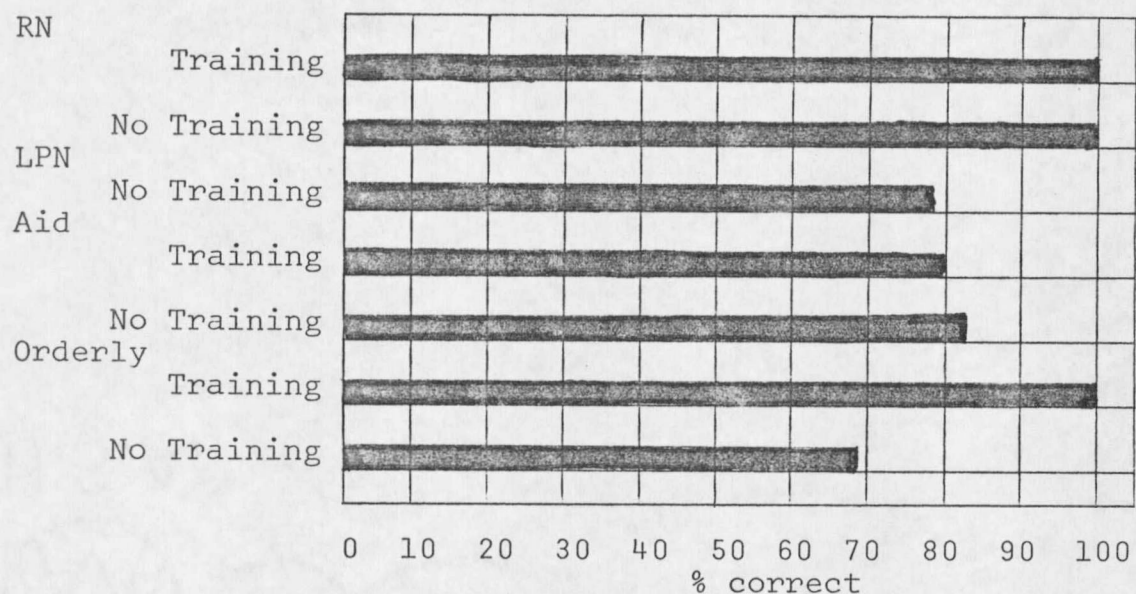


Figure 18

Graph of Question 18

Significant difference in test scores noted in the Orderly position; those who had special training scored higher than those who had no special training.

19. f Body Mechanics - principles of the functions of the muscles and joints

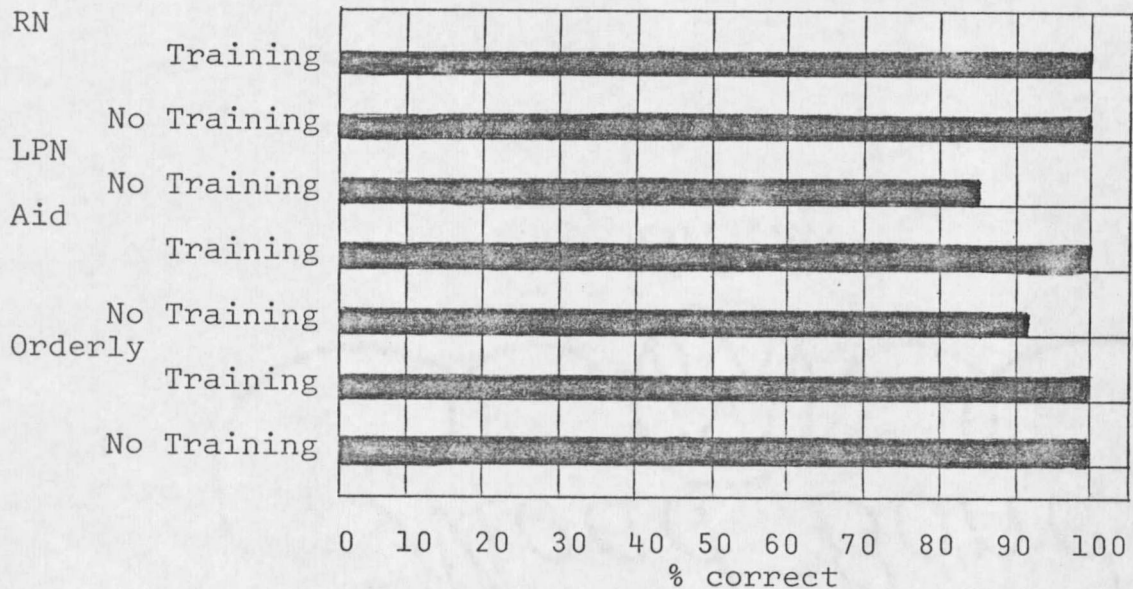


Figure 19

Graph of Question 19

No significant difference noted in the test result for any position in understanding terminology.

20. a Flexion - motion of bending

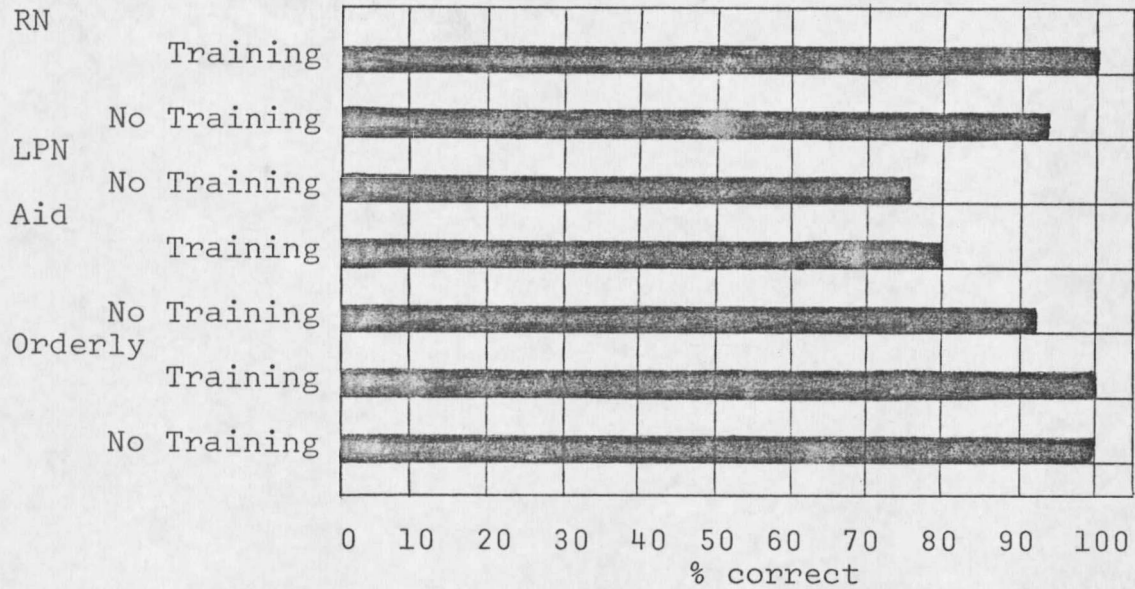


Figure 20

Graph of Question 20

No significant difference in test results for any position understanding terminology.

21. b Hyperextension - exaggerated extension

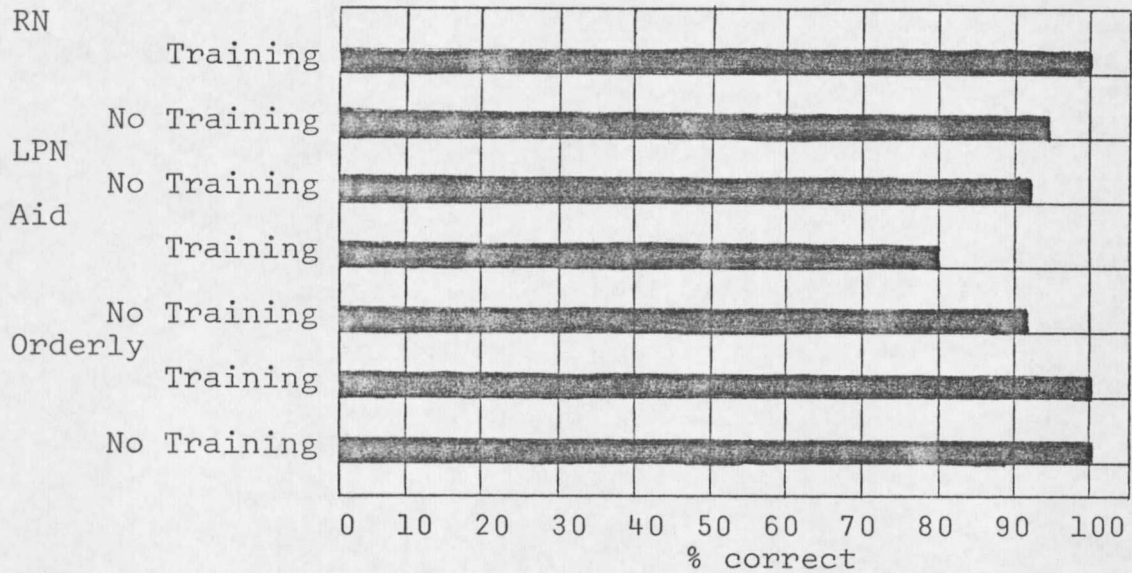


Figure 21

Graph of Question 21

No significant difference noted in test results for any position in understanding terminology.

22. e Abduction - motion away from midline of body

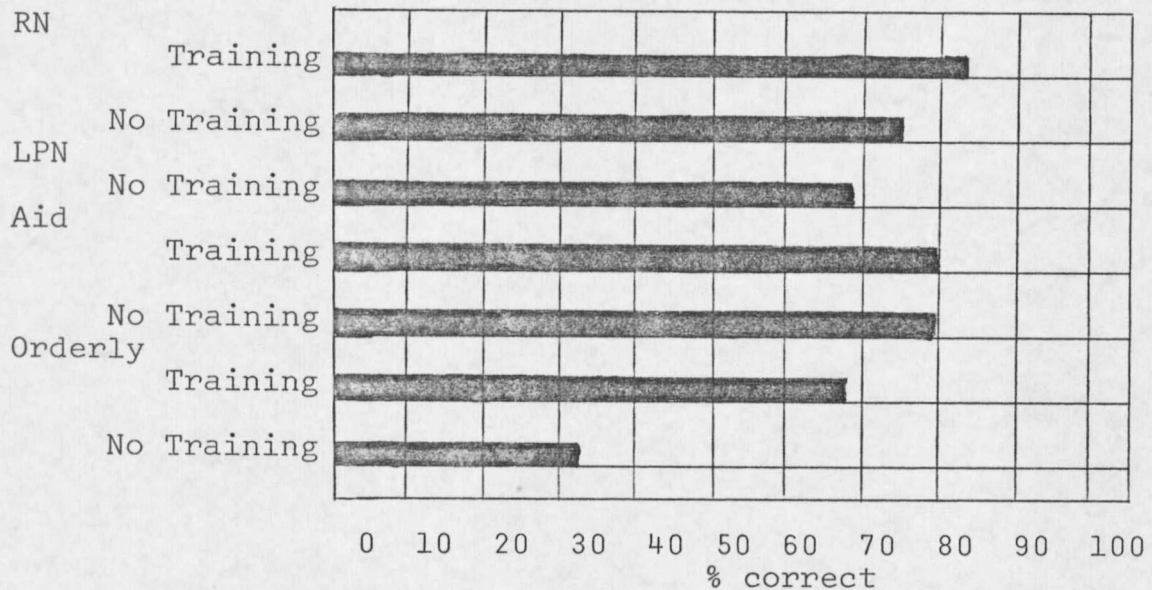


Figure 22

Graph of Question 22

Significant difference noted in test results; those Orderlies who had special training scored higher than those who had not, in understanding terminology.

DIAGRAM QUESTION 23

If you were to walk into a patient's room what two errors might you see concerning the traction set up for skin traction applied to the lower leg?

(See Appendix B, page 100 for diagram)

(1) the weight is not hanging free from the foot of the bed;

(2) the patient has no trapeze with which he can aid in moving.

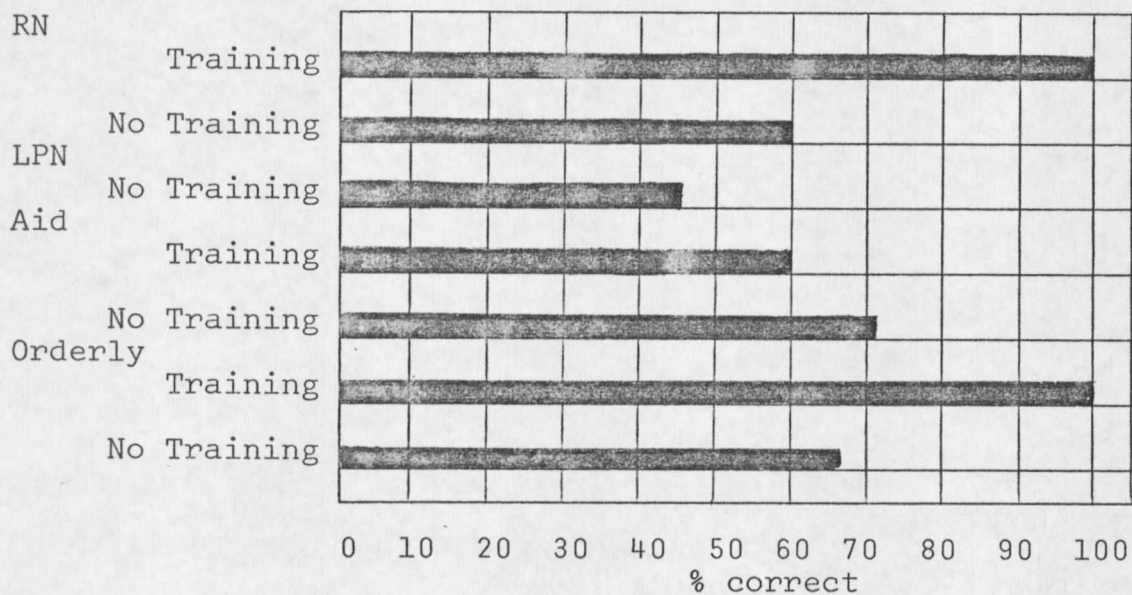


Figure 23

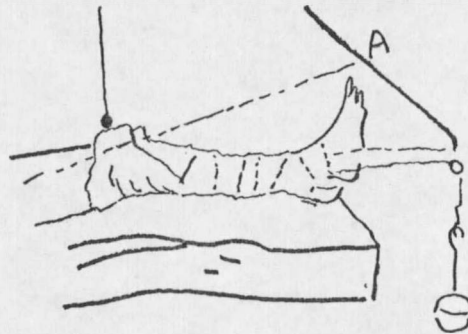
Graph of Question 23

Significant difference in test scores noted for the R.N.'s and the Orderlies in special training. Nursing personnel who had had training scored higher than those who had not had special training.

TRACTION DIAGRAM QUESTION 24 and 25

Write in the name of the traction shown in the blank under the picture.

24.



The direction of the traction force is toward A

Buck's extension

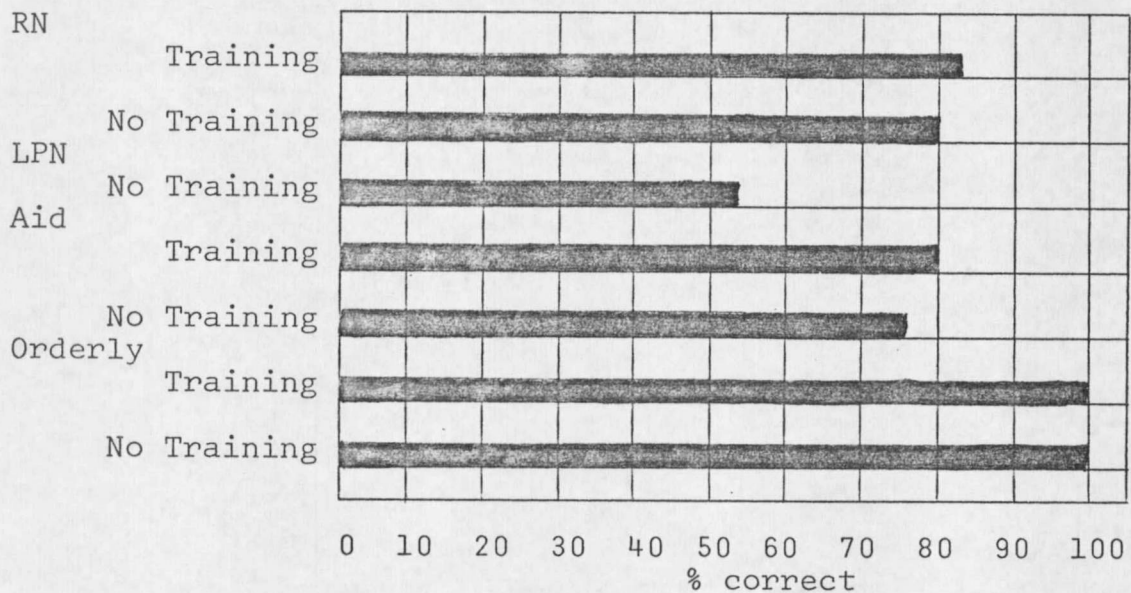


Figure 24

Graph of Question 24

No significant difference noted in test results for identifying traction in any position.

25.

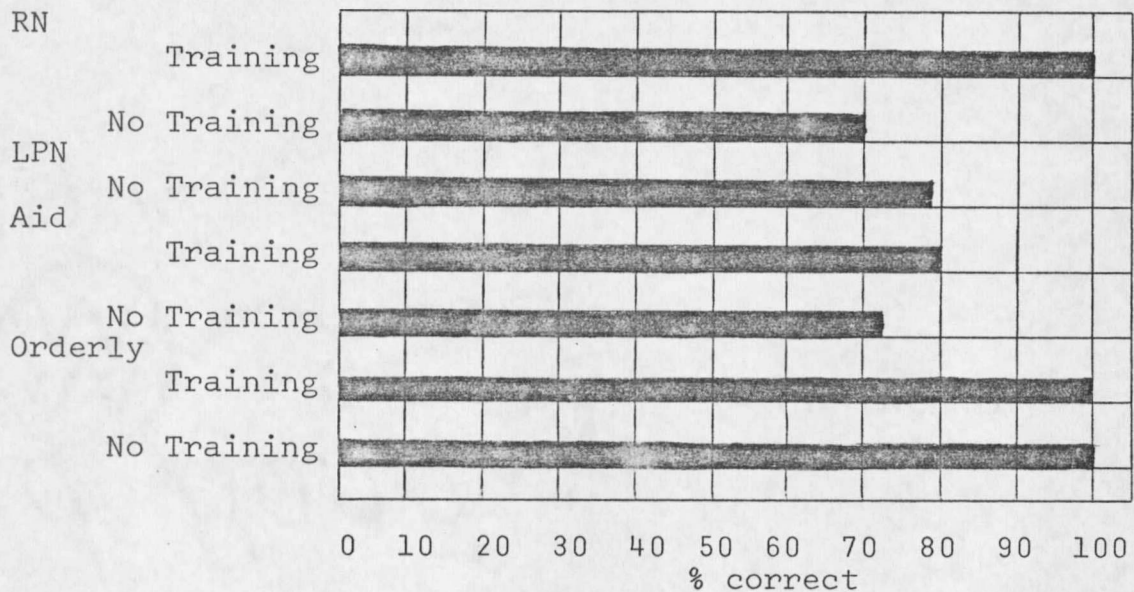
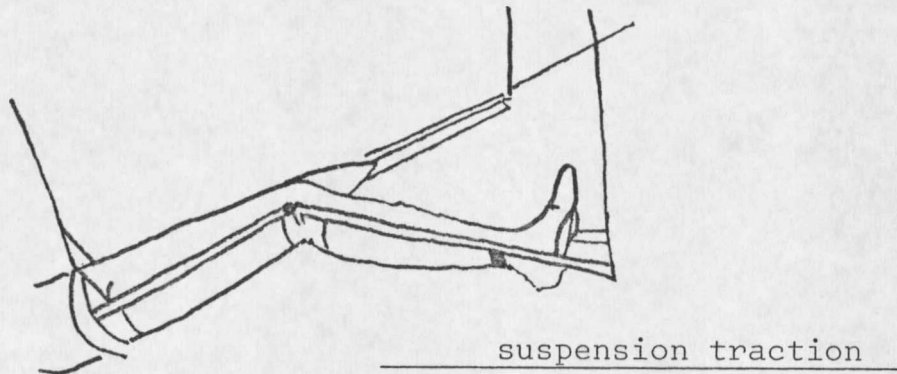


Figure 25

Graph of Question 25

Significant difference in test scores noted for R. N.'s who had special training. R. N.'s who had had training scored higher than those who had not had special training.

In Table II four areas of basic orthopedic nursing care are identified and sectioned. The test questions that dealt with each area were separated and placed under the area heading. The percent of correct answers for each question by the four personnel positions were then presented under the area heading. The personnel positions were then further divided to present the score results for those personnel who had had special training in orthopedic nursing care and those who had never received special training. The scores were compared to the established grading scale to identify the score results that were in the percentile that determined failure to understand basic nursing care principles. These were identified by an asterick.

Table 2
Complete Test Results

	Body Mechanics		Traction		Cast		Turning	
	Training	No Training	Training	No Training	Training	No Training	Training	No Training
#1 RN	100	93-94	#3 66-67	40*	#5 100	100	#7 100	60
LPN		84-85		46-47*		92-93		61-62
Aid	80	72	60	56*	80	72	80	56*
Orderly	100	66-67	33*	33*	100	66-67	33*	33*
#2 RN	100	90	#4 100	85	#6 83-84	75	#8 83-84	55*
LPN		100		61-62		69-70		69-70
Aid	80	88	40*	60	40*	56*	60	76
Orderly	100	100	33*	33*	66-67	66-67	100	66-67
#17 RN	100	80	#8 100	100	#11 66-67	45*	#14 100	100
LPN		69-70		92-93		46-47*		92-93
Aid	80	88	100	96	20*	44*	100	96
Orderly	66-67	66-67	100	100	0*	33*	100	100
#18 RN	100	100	#9 66-67	45*	#12 33-34*	40*	#15 100	85
LPN		76-77		38-39*		61-62		92-93
Aid	80	84	80	36*	60	52*	100	100
Orderly	100	66-67	100	66-67	66-67	66-67	100	66-67
#19 RN	100	100	#10 83-84	100	#16 66-67	60		
LPN		84-85		92-93		53-54*		
Aid	100	92	60	96	20*	52*		
Orderly	100	100	100	100	66-67	66-67		
#20 RN	100	95	#23 100	60				
LPN		76-77		46-47*				
Aid	80	92	60	72				
Orderly	100	100	100	66-67				
#21 RN	100	95	#24 83-84	80				
LPN		92-93		53-54*				
Aid	80	92	80	76				
Orderly	100	100	100	100				
#22 RN	83-84	75	#25 100	70				
LPN		69-70		76-77				
Aid	80	80	80	72				
Orderly	66-67	33*	100	100				

* score below 60%

% Correct responses

90-100 Complete Understanding of Basic Care
80- 89 Good Understanding of Basic Care
70- 79 Fair Understanding of Basic Care
60- 69 Questionable Understanding of Basic Care
0- 59 Failure in Understanding Basic Care

Chapter 4

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The purpose of this study was to evaluate orthopedic personnel in their knowledge and understanding of basic nursing care. In order that better nursing care can be given to the orthopedic patient, the first step is to identify areas that nursing personnel fail to understand and demonstrate a need for further learning.

It was necessary to determine the need for special training of personnel in the R. N., L. P. N., Nurse Aide and Orderly positions by comparing the test results of personnel who had had special training in orthopedic nursing care with those personnel who had received no training.

A questionnaire was formulated to determine the general background of the participants, their work experiences and their definition of orthopedic nursing care. A test was formulated including selected areas in orthopedic nursing care based upon a search of orthopedic literature and qualified specialists. Both the questionnaire and the test were evaluated by supervisory personnel,

two physicians and by classmates to determine if they were specific for the study.

Nursing supervisory personnel who were to conduct the testing were either notified by telephone or by letter requesting a personal interview. In the interview the investigator explained the purpose of the study and their participation in conducting the study, the number of staff personnel needed to participate and permission to include the hospital in the investigation. Five hospitals in the State of Montana participated in the study. One hundred tests and questionnaires were given by the investigator to nursing supervisory personnel of the five hospitals between February and June of 1972. By August of 1972 the questionnaires and tests had been returned to the investigator. Because of errors on the part of the respondents in completing either the questionnaires or the tests, however, the final sample consisted of seventy-five paired tests and questionnaires.

The data which were obtained were analyzed for frequency distribution of correct test scores for each position; a comparison was made between test scores of

personnel who had had training and those who had never received special training in orthopedic nursing care.

Conclusions

The sample population in this study was reduced of necessity to seventy-five because of obvious errors on the part of the participants in completing the questionnaire or the test. The questionnaire and test had been reviewed by specialists and established as valid; however, the respondents may not have spent sufficient time in the completion of the questions or the test for the investigator to determine accurately the performance of the participants. However, the responses obtained to the questions do indicate a significant differentiation in test results for all four positions of personnel to determine the need for training in basic orthopedic nursing care. Personnel who had had training through inservice classes, workshops, or personal attention scored higher in the total test scores than those who had never received any training in orthopedic nursing care. In question three of the test personnel averaged 43.75% correct responses which is 16.25% below the established score for failure in understanding principles of traction; question four personnel averaged 58%; question

nine personnel averaged 61% in correct response in understanding principles of traction. The questions concerning care of the patient in a cast showed a significant failure in personnel understanding nursing care. Questions six, eleven, twelve and sixteen scored below the 60% competent care line. Nursing personnel who had received training scored a significant difference in the test results. Scoring results were higher for personnel who had had training. It can be concluded that there is a need for an inservice education program in basic orthopedic nursing care with emphasis on care of the patient in traction and confined in a cast.

Total score percentile for each personnel position were calculated and the results were compared. Registered Nurses who had had special training scored 88% total correct responses; Registered Nurses who had never had specific training in orthopedic nursing care scored 77% correct responses. There were no Licensed Practical Nurses who had had special training in orthopedic nursing care so no comparison could be made between their test scores; however, they had 71-72% correct responses for the test. The Nurse's Aides did not show a significant differentiation in their test scores. Those who had had special training scored

lower than the Aides who had never had training although not enough for comparison. Both groups scored on the scale below the average 76% for the four personnel positions. Those who had had training scored 71.2% total correct responses and those who had not had training scored 74% total correct responses. The Orderly position scored a significant difference in their total test scores; the results calculated 81% for those who had had training in orthopedic nursing and 71% which was below the average for those who had had no training. In determining personnel that statistically shows a need for further training in orthopedic nursing care both the LPN's and the Nurse's Aides have been identified. The overall evaluation of the four positions statistically shows the value of a program for specific training in orthopedic nursing care in emphasis in proper body mechanics for both the patient and the nursing personnel, care of the patient in traction, care of the patient confined to cast, and turning and positioning patients post-surgery or with restricted motion.

Nursing personnel recognize their need for a training program in orthopedic nursing care, (See Appendix E). They identify the orthopedic unit as a specialized unit requiring personnel who are knowledgeable in the care of

patients with fractures, in casts, in traction and with back disorders. They identified the need for training not only in meeting the patients' physical needs but also emotional needs. They recognize the importance of good body mechanics and correct body alignment for their patients but also for themselves. Their purpose is to aid the patient to again function as well as possible so that he might again return to the functioning he is capable of in the shortest period of time possible. The nursing personnel were very conscious of the needs of the long term patient and their responsibility in maintaining their morale. They also emphasized their responsibility in helping the patient to adjust to his limitations whether they be temporary or permanent. One staff member summed up the definition of orthopedic nursing care as "lots and lots of tender loving care."

Recommendations

After reviewing the findings of the study, this investigator believes there are several recommendations for further study.

1. The same study could be replicated through the use of a larger sample and a strict method for selecting an equal number personnel for each position.

2. A similar study could be conducted limiting the participants from only one of the positions in order to identify the needs of these personnel, for instance, a study with only R. N.'s as participants would clarify the need for further training in orthopedic nursing for the R. N. level.

3. A similar study could be conducted similar to this study but including observation by the investigator of the participants to determine application of the principle of basic nursing care.

4. Another study could be done by testing personnel after having conducted a series of classes in orthopedic nursing care and using a control group for comparison.

5. Another study could be conducted with emphasis on establishing an inservice education program from the results obtained.

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APPENDIX

APPENDIX A

QUESTIONNAIRE

AGE:

SEX:

1. What position do you hold?
(circle one)

(a) Registered Nurse

(b) Licensed Practical Nurse

(c) Nurses' Attendant (Aide)

(d) Orderly

2. What is your educational background?

3. How long have you worked on an orthopedic ward?

4. Have you had experience in orthopedic nursing care in a setting where there was no defined orthopedic ward?

5. How long have you worked on this orthopedic ward?

6. Have you ever had any special training for orthopedic nursing? (If "yes", please explain)

Appendix A (continued)

7. From whom have you learned what you know about orthopedic nursing? (circle one)

- (a) Head Nurse
- (b) Physician
- (c) One you work with
- (d) Other _____

8. Have you benefited from inservice education classes in the past?

9. Is there any area in orthopedic nursing in which you would like to have in an inservice education class?

(If so, please explain)

10. Do you feel confident in your care of the orthopedic patient? (If not, please explain)

11. Do you believe that the orthopedic ward is a specialized nursing care unit as compared to the intensive care unit or coronary care unit?

12. In your own words define what you believe orthopedic nursing care to be.

APPENDIX B

TEST

MULTIPLE CHOICE QUESTIONS 1 thru 7

Circle the small letter of each correct answer. With each question the number of correct answers will be given in parentheses on the right side of the test page.

1. The purpose of orthopedic nursing is the maintenance or restoration of proper body mechanics by: (3)
 - (a) maintaining normal range of joint motion
 - (b) maintaining fluid intake
 - (c) functional positioning
 - (d) correct body alignment

2. The application of the principles of body mechanics involves: (1)
 - (a) the patient
 - (b) the nurse
 - (c) the bed
 - (d) both the patient and the nurse

3. The purpose of traction is to: (3)
 - (a) immobilize an extremity
 - (b) lessen muscle spasm
 - (c) make the patient much more comfortable
 - (d) reduce a fracture

Appendix B (continued)

4. The nursing care of a patient in traction includes frequent observations of the traction equipment. Purpose of traction will be reduced by: (3)

- (a) friction created by ropes riding on the foot of the bed
- (b) ropes impinged by bedclothes
- (c) heels digging into the mattress
- (d) the patient's legs in contact with the bed

5. In caring for a patient in a cast, certain observations must be made. The nursing personnel checks the cast and the patient: (3)

- (a) to determine if the cast is too heavy for the patient
- (b) for a musty odor which may be evidence of a sloughing area beneath the cast
- (c) by feeling and looking for skin irritations at the cast edges
- (d) for swelling or discoloration of the toes

6. What criteria do you judge when to notify one in charge or the physician when a cast is causing a problem?

- (a) pain (3)
- (b) general discomfort of the cast
- (c) pallor
- (d) numbness or paralysis

Appendix B (continued)

7. What particular motion must be avoided in caring for a patient post operative prosthetic hip surgery?

(posterior approach)

(3)

- (a) flexion
- (b) internal rotation
- (c) adduction
- (d) abduction

TRUE-FALSE QUESTIONS 8 thru 13

Answer either true or false in the blank to the left of each question

8. ____ The application of traction means a pulling force is applied to an extremity or a part of the body.

9. ____ Even a sufficient countertraction will not prevent the patient from sliding toward the foot of the bed when traction has been applied to the lower extremity.

10. ____ In bathing a patient with a fractured femur who is in traction the weights may be removed in order that the nursing personnel may much more easily bathe the back and buttock area.

11. ____ An infrequent cause of pressure sores of orthopedic patients is allowing an incompletely set cast to lie unsupported on a hard surface.

12. ____ A cast tends to become much hotter over an area that is beginning to discharge.

13. ____ Unless specified by the physician turning should always be done on the side not enclosed in plaster or toward the side that has not been operated upon.

Appendix B (continued)

FILL IN THE BLANK QUESTIONS 14 thru 16

For each question place the word or words in the blanks provided.

14. In washing the patient's back close observation should be paid to the _____ area which is an extremely vulnerable spot that must have constant care to prevent breakdown of the skin.

15. In caring for a patient that must be log rolled to turn from the back to the left side what four placements of pillows would you use for greatest comfort and body alignment for the patient? _____, _____, _____, and _____.

16. What time period is most critical after a cast has been applied for checking for swelling, discoloration, and numbness? _____.

MATCHING QUESTIONS 17 thru 22

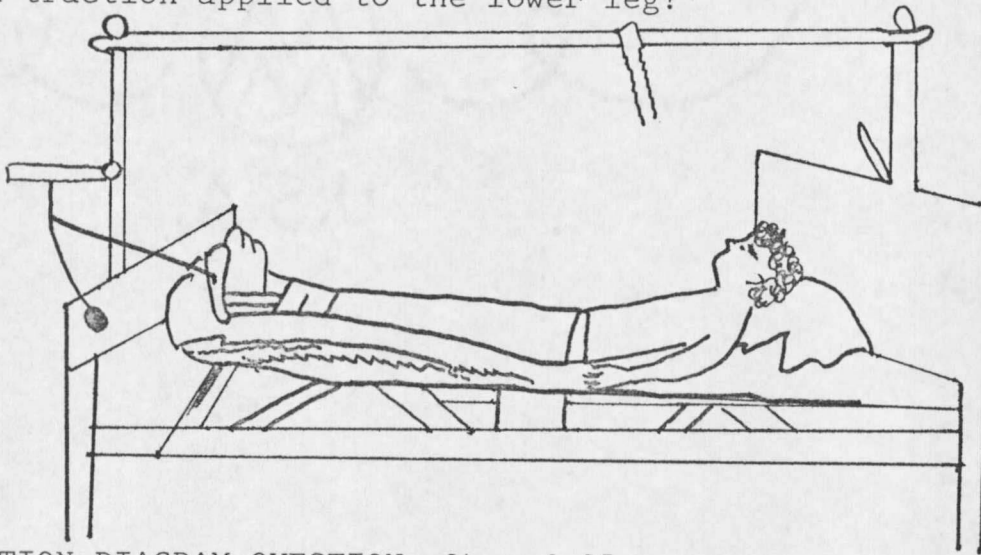
For each term in column A place the definition's letter from column B in the blank to the right of the term.

<u>Column A - Term</u>	<u>Column B - Definition</u>
17. _____ Adduction	(a) motion of bending
18. _____ Extension	(b) exaggerated extension
19. _____ Body mechanics	(c) motion toward the midline of body
20. _____ Flexion	(d) motion of straightening
21. _____ Hyperextension	(e) motion away from midline of body
22. _____ Abduction	(f) principles of the functions of the muscles and joints

Appendix B (continued)

DIAGRAM QUESTION 23

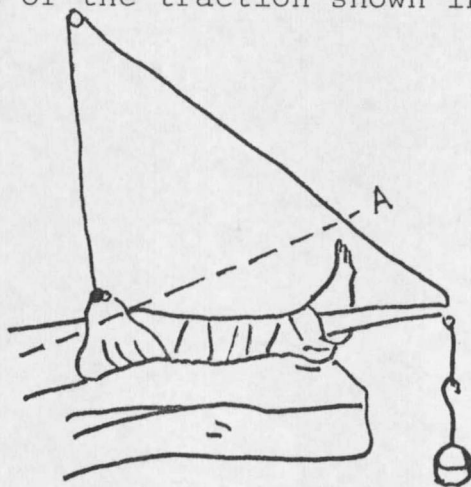
If you were to walk into a patient's room what two errors might you see concerning the traction set up for skin traction applied to the lower leg?



TRACTION DIAGRAM QUESTION 24 and 25

Write in the name of the traction shown in the blanks under the picture.

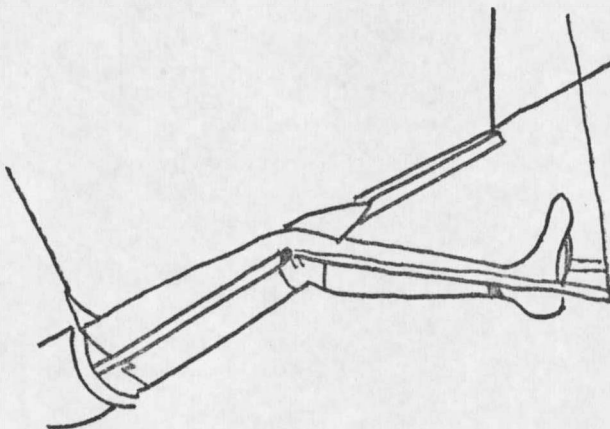
24.



The direction of the traction force is toward A

Appendix B (continued)

25.



APPENDIX C

LETTER SENT TO THE DIRECTOR OF NURSING

Bozeman, Montana
April 11, 1972

Director of Nursing Service
Billings Deaconess Hospital
Billings, Montana 59102

Dear Mrs. Dodd:

I am a student in the graduate program at Montana State University. For a part of the requirements I am doing a study of the nursing care of orthopedic patients on a defined orthopedic ward. I am working through a questionnaire which is for general information of the nursing staff on the ward and a test which has been carefully made up to determine what nurses know about the basic nursing care of orthopedic patients. This will be a basis for inservice education programs.

I would appreciate being able to talk to you and further explain my study that I may work through your hospital in my study.

I will be in Billings on Thursday, April 20th, would you be free during that day to see me for a short time? I could make the appointment anytime after eleven o'clock that day.

Sincerely

Miss Myrna Mink
419 N. 4th
Bozeman, Montana 59715

The graduate staff at Montana State University would appreciate your cooperation

(Mrs.) Laura Walker, R.N., Ph.D.
Director, School of Nursing.

APPENDIX D

LETTER SENT TO THE DIRECTOR OF NURSING

Bozeman, Montana
April 11, 1972

Director of Nursing Service
St. Vincent Hospital
Billings, Montana 59103

Dear Sister Therese Martin:

I am a student in the graduate program at Montana State University. For a part of the requirements I am doing a study of the nursing care of orthopedic patients on a defined orthopedic ward. I am working through a questionnaire which is for general information of the nursing staff on the ward and a test which has been carefully made up to determine what nurses know about the basic nursing care of orthopedic patients. This will be a basis for inservice education programs.

I would appreciate being able to talk to you and further explain my study that I may work through your hospital in my study.

I will be in Billings on Thursday, April 20th, would you be free during that day to see me for a short time? I could make the appointment anytime after eleven o'clock that day.

Sincerely,

Miss Myrna Mink
419 N. 4th
Bozeman, Montana 59715

The graduate staff at Montana State University would appreciate your cooperation

(Mrs.) Laura Walker, R.N., Ph.D.
Director, School of Nursing.

APPENDIX E

VERBATIM RESPONSE - DEFINITION OF ORTHOPEDIC NURSING CARE

In your own words define what you believe orthopedic nursing care to be.

#Lots and lots of T. L. C.

#Maintaining body in proper alignment in order to enable healing processes; keeping patient's skin in good care so as to prevent decubitus; instructing patient in reason and use of braces etc. and activities which are and are not permissible with these apparatus.

#It is treatment of deformities, disease and ailments of the patient locomotive apparatus and joints.

#Orthopedic nursing is the rehabilitation of that part of the patient's body back to normal or partly normal movement, with such things as good traction alignment; teaching good body mechanics to back patients. It also takes a bit of psychology to give some patients more strength and stamina than they normally have to get them back on their feet, and want to live.

#To return patient to normal life with least amount of problems.

#Total care of the patient as he is rehabilitating and adapting to his physical problem which mainly involves motivation.

#To reconstruct and correct injured or deformed bones, and rebuild and increase muscle tone on the patient. Also to help the nurses maintain good body mechanics to better protect herself from injury.

#Anticipating problems with immobility; facilitating physical and occupational rehabilitation.

#Helping patient understand condition and importance of body alignment. Give supportive care as needed. Help keep patient occupied with doing things.

#Care of the patient with injuries or disease to the muscle and skeletal system while in the process of healing. Also restoring to function this area as much as possible; making their stays as bearable as possible.

#It is the care of patients with bone disorders or injuries. You should take time to learn how to set up traction and care for these patients. This type of ward should have people that are trained specially to work on it. It is of importance to do the right thing at the right time or end up crippling a patient for life.

#Care of an orthopedic patient consists of maintaining good body alignment to be sure traction pull is doing its job. Good skin care to prevent pressure sores; a friendly manner as most patients are long term patients and at times get depressed and discouraged.

#Care of bone patients per doctor's orders and accepted care.

#Turning and positioning of patients.

#Proper care of an orthopedic patient till the patient is as normal as possible. Proper alignment, proper exercise and proper diet. I also feel an orthopedic patient has many mental problems, that they need help.

#I believe orthopedic nursing care is knowing how to care for people who have broken bones and back injuries without causing more damage and discomfort to the patient.

#Comfort of patient; proper healing of fractures and other problems.

#Care of patient in traction - fractures or surgical; keeping the patient comfortable; recognizing danger signs - cast care, traction; care of patient in traction.

#Care of the patient with fractures or bone abnormalities - to the point of discharge. Including not just orthopedic care but generalized bedside nursing care of physical and mental needs.

#Specialized unit for care of fractured bones; also to care for persons with bone surgery such as spinal fusion, etc.

#Total patient care - mental and physical. Especially good skin care and ambulating including bed rest. Patients who should be turned and encouraged to be active.

#Orthopedic nursing involves the functions of the musculo skeletal system of motion, support and protection. The preservation of motion is our one big responsibility. The nurse must use good body mechanics herself to safely and correctly use her strength and team others. All movement must be gentle and firm.

#Care of patients with disabilities and problems with muscles and bones; nursing care involves maintaining proper body mechanics, body alignment, and preventing contractures and further deformity; protecting from infections and planning and carrying out rehabilitation of patient.

#Helping the patient with musculo-skeletal conditions with his physical problems in order for comfort and healing; and also with his psychological and social needs during this period.

#Practicing and teaching body mechanics. Pre-surgical teaching. Physical therapy. Understanding and watching for circulatory and neurological deficits on fractures, discs, etc.

#Orthopedic nursing care is important in moving, turning and good body alignment.

#Taking care of patients with diseases and trauma to bones and joints of the body by giving good physical care, encouragement and good therapy.

#Specialty nursing care involving acute care of rehabilitation to help patients be an active participant of community.

#Orthopedic nursing is caring for and helping to restore, as closely to normal function as possible, those individuals afflicted with injury or disease of the musculo-skeletal system.

#Care of the whole patient, his physical, mental, oftentimes when indicated spiritual needs; learning in mind at all times as many of the potential complications that can occur and being alert for these symptoms. Being understanding of emotional disturbances that will disrupt patients equilibrium with confinement, immobility and drugs and being ready to help them through these periods.

#Orthopedic nursing is a combination of psychological nursing care, good body mechanics for patient and nurse, and rehabilitation with physical therapy, occupational therapy and recreational therapy.

#Care of a patient with a bone fracture, surgical repair of bone fracture, or management of muscle trauma.

#Orthopedic nursing care is important in moving, turning, and positioning patients - It is a feeling of satisfaction to know how to make these people more secure and comfortable.

#Excellent nursing care given to patients with fractures and injuries to muscles to retain or return the patient to normal range of motion and function if possible, also to maintain a state of independence and self care as much as possible.

#The care of any patient with an orthopedic injury or condition requiring skilled nursing care. That nurse with special knowledge of the conditions and skills of orthopedic nursing.

#Good body alignment with proper body mechanics, maintaining emotional stability by emphasizing hopeful and complete recovery. Importance of patient in keeping up exercises here as well as at home.

#Care of patients who have bone, muscle and joint diseases and injuries which provides physical and emotional support to prevent complications and promote comfort and healing.

#I think orthopedic nursing is a combination of medical and psychiatric nursing along with taking care of broken bones and pulled muscles. Helping a patient adjust to getting along with a limb missing or to being paralyzed is as important a part of orthopedic nursing as the physical needs.

#The know-how of turning and positioning the patients. Extra good care on elderly patients and turning more often. These folks tend to get bed sores more easily. Just plain helping out with whatever one can. After-all the majority of them don't ask that much from us.

#That a person working with an orthopedic patient should definitely know how to care and handle a patient as it is as important before surgery as after to know how and what to do for the patient. That is why I think a person should have training, knowing how, feeling confident in caring for the patient.

#The care of both and limb to maintain correct alignment and positioning. Restore body function and limb function with the ultimate goal of the patient becoming ambulatory and going home.

#Orthopedic patients need to be made as comfortable as possible with their positions changed often. Since quite a few of the patients are hospitalized for a long time, you need to keep their morale up as much as possible. Each patient has different types of needs depending on what type of surgery is done. Patients need to adapt to whatever disability they have. Long term patients need more help in all the problems they have at the present and will have in the future.

#Orthopedic nursing includes the ability to care for patients with broken bones to prevent deformities. One needs to have the knowledge of turning, positioning, and making the patient comfortable. One also needs a knowledge of traction and the care of a patient in traction. Because of turning and moving these patients, it is important to know and use proper body mechanics to keep from causing harm to yourself.

#Should have all orthopedic patients only and sufficient help to take care of them so we can learn more about the care and spend more time with them in their care, etc.

#The proper care of fractures or surgery patients to enable them to recover to their fullest capacity. Helping patients adjust to the problem they may have such as teaching them how to get along with using crutches, artificial limbs, braces or wheel chairs, etc. Our patients are long term patients, this means not only orthopedic care, keeping the humor and the ego up with our patients and making them feel necessary.

#The whole floor should be orthopedic only! We would need doctors who would have time to help us with orthopedic problems. Instead of order, physical help. Enough nurses to help the Aides.

#Know how to handle, move, lift, and align the body in the best and correct way.

#Orthopedic nursing care is a complex combination of good nursing care, rehabilitation, and preventative nursing. Not only must we treat each orthopedic patient as a regular surgical patient, but we must maintain the correct body alignment and movement conducive to healing (for instance; abduction and rotation of hip prosthesis); help them learn to sit, stand, walk, etc., again; maintain good skin care, exercises and lung expansion while the orthopedic patient is confined to bed. Plus, finally, tend to the psychological repercussions which usually accompany the average orthopedic recuperation.

#Instead of having all kinds of patients, we should just have orthopedic patients. Then we could have more time to spend with each one and we could learn more how to take care of each one of them.

#To help patient rehabilitate injured part of body. To prevent breakdown of skin and other complications from prolonged bedrest. To keep patient as comfortable as possible while he is confined in bed. To help patient become self-reliant again.

#To keep the patient in proper position. Encourage the patient as these patients usually spend a long time here and tend to get depressed. Special care in bathing because without being able to take a tub bath they need it more.

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An evaluation of
personnel knowledge and
understanding of
basic orthopedic nursing

care

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Exp 2