A PILOT STUDY TO DETERMINE THE EFFECTS OF IN-SERVICE EDUCATION FOR NURSING PERSONNEL IN SIMPLE REHABILITATIVE NURSING CARE ON THE ACTIVITY LEVEL OF PATIENTS IN NURSING HOMES

by

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A Pilot Study to Determine the Effects of In-Service Education for Nursing Personnel in Simple Rehabilitative Nursing Care on the Activity Level of Patients in Nursing Homes

Thesis directed by Associate Professor Elda Popiel

This study was conducted to determine the effects of in-service education for nursing personnel in simple rehabilitative nursing care on the activity level of patients in nursing homes. A structured observation and an interview was used in order (1) to observe the present activity level of the total population in a selected nursing home, and (2) to reevaluate the activity level of the same patients after the nursing personnel caring for them had been exposed to in-service education in simple rehabilitative nursing care. Because some change may occur in the activity level of patients without any change in nursing care, the patients of another nursing home were observed on two occasions as a control group. It was hoped that this study would provide information that could be used as a basis for in-service education programs for nursing personnel in nursing homes.

This study was designed to identify the effects of in-service education for nursing personnel in simple rehabilitative nursing care on the activity level of patients in nursing homes.
The findings revealed that the patients who were recipients of simple rehabilitative nursing care made greater gain toward independence in activity than the patients in the control group even though the gain was small.

This abstract of about 200 words is approved as to form and content. I recommend its publication.

Signed

Instructor in charge of thesis
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CHAPTER I

INTRODUCTION

In the study of patients in nursing homes, it is necessary to gain some understanding of the part that nursing homes play in the care of patients, especially those who are aged and chronically ill. The function of the nursing home has changed markedly with the passage of time. Previously, custodial care and some personal care was the usual regime, and medical and nursing services were incidental. Today the health services have become increasingly important, and are paramount to the care of all who are ill, including the aged and chronically ill. Both nonprofit and proprietary nursing homes have grown so rapidly that they now constitute a major facility in the care of patients and as an alternate to hospital care.

Within the last two decades the many social, economic and medical developments have led to an increasing proportion of elderly persons in the population, many of whom are

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ill. These factors have also led to the establishment of many new nursing homes.\textsuperscript{3}

From the relatively small number of nursing homes twenty years ago, the number increased to between 25,000 and 30,000 by 1958.\textsuperscript{4} The approximate number of beds in nursing homes and general hospitals in the United States was 450,000 for each.\textsuperscript{5} Most of these homes were privately operated.\textsuperscript{6}

Some of the persons who operate nursing homes or homes for the aged are registered nurses; others are licensed practical nurses. However, by far the majority of those engaged in this work have not had any training for it.\textsuperscript{7}

One of the major differences in the patients in hospitals and nursing homes is the length of stay. Figures show that the average length of stay for a hospital patient is 7.7 days, and that most of these patients are acutely ill. The average length of stay of a nursing home patient is 1.9 years, and these patients are rarely acutely ill.\textsuperscript{8}

The nursing home of today evolved out of a need for its services. With the evolving of the nursing home there has been concern over the standards of care offered and the


\textsuperscript{4}Ibid.

\textsuperscript{5}Robert Morris, \textit{loc. cit.}

\textsuperscript{6}Ralph C. Williams, \textit{loc. cit.}

\textsuperscript{7}Ibid.

licensing of the nursing home. It is recognized that the standards of care vary greatly in the many nursing homes, and that there is a need for improvement. The American Nursing Home Association and other interested groups are working toward the improvement of the facilities, and toward solving the problem of adequate and qualified staff. The primary need seems to be for staff which is better equipped to offer a higher level of care to the patients.\(^9\)

Within the medical and nursing care of patients, one of the aims of rehabilitation is to help every patient become able to function to the limits of his capacity to perform. The persons who are assisted and encouraged to do as much for themselves as possible are viewed as much happier and less dependent upon society.

### I. STATEMENT OF PROBLEM AND PURPOSE

#### Statement of the Problem

This study deals with a determination of the effect of in-service education for nursing personnel in simple rehabilitative nursing care on the activity level of patients in nursing homes.

#### Purposes of the Study

The purposes of this study were: (1) to observe the present activity level of the total population in a selected

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nursing home according to a rating scale devised by the Colorado State Department of Public Health, and (2) to reevaluate the activity level of the same patients after the nursing personnel caring for them had been exposed to in-service education in simple rehabilitative nursing care.

Need for the Study

The present day and expected population trend is toward a higher percentage in the older age group. It is common knowledge that many persons in the older age group are chronically ill, are unable to manage by themselves and, as a result, are patients in nursing homes. Many of these patients are disabled from chronic disease and have regressed into a dependent state which calls for assistance in performing the activities of daily self-care. These patients are entitled to and should have the opportunity to function to their fullest capacity to perform within the limitations of their disabilities. With identification of limitations, simple rehabilitative nursing care can be directed into the areas where it is needed and can be of benefit.

There is a need for evaluating the patients' limitations, for determining what needs to be done, and how the desired results can be accomplished. The identification of the needs of patients is essential to the improvement of the care of the patients in nursing homes.

The literature on nursing homes describes the necessity for the improvement of the quality of care to the patients. It is safe to state that rehabilitation in some
form is most always a need of all chronically ill persons. Therefore, with the identification of the problems, nursing will be better able to administer to the needs of the patients.

Scope and Limitations of the Study

This study was a pilot study to determine the effectiveness of simple rehabilitative nursing care on the activity level of the patients in a selected nursing home. The study was conducted under the auspices of the Colorado State Department of Public Health.

The scope and limitations of the study were:

1. Two nursing homes were selected for the study. The patients in one nursing home were used as a study group, and the patients in the other nursing home were used as a control group.

2. All of the patients in these two nursing homes were observed during the first evaluation of patients. For the second evaluation, only the patients who were present for the first evaluation were observed. No new admissions were used in this study.

3. The two nursing homes selected for the study were similar in the staffing pattern and the physical facilities. There was no apparent evidence the patients were not from comparable socio-economic groups.

4. The rooms in the two nursing homes were similar in that there were semi-private or private rooms. In one nursing home there was one four-bed ward, and in the other there was one four-bed ward and one three-bed ward.

5. The patients in both nursing homes were similar in physical limitation.

6. Both of the nursing homes were relatively new buildings and were built for the purpose of a nursing home.
7. The study is limited to the extent to which the tool measured what it was purported to measure and by the investigator's consistency in using the tool to evaluate the patient's independence.

II. DEFINITION OF TERMS

The definition of terms presented were for the purpose of this study. The terms were defined by and in accord with the study being conducted by the Colorado State Department of Public Health.

*Simple rehabilitative nursing care* was defined as nursing care which incorporates self-care activities of locomotion, transfer, feeding, grooming, dressing, and toileting.

Definitions of the self-care activities in the six designated functional areas were:

**Locomotion** was defined as the ability to get from one place to another including the use of wheelchair, crutches, and cane.

**Transfer** was defined as the ability to get from one state or position to another state or position as from bed to wheelchair, from bed to standing position, from wheelchair to another chair, etc.

**Feeding** was defined as the ability to feed oneself.

**Grooming** was defined as the ability to wash, shave, comb hair, apply make-up, etc.

**Dressing** was defined as the ability to dress oneself.
Toilet was defined as the ability to toilet oneself and to exercise continence control.

The following descriptive terms were designated as the levels of activity for rating the patient. These terms were used in accord with a rating scale. The scoring for the degree of activity was from zero (0) through (3).

I. For the score zero (0)—does not:

A. Definition

1. Patient does not have the ability to do self-care activities because he lacks motivation. (Absence of patient motivation.)

2. Patient does not have the physical ability to do self-care activities because he needs to be taught the procedures. (Nurse-teacher role.)

3. Patient has a physical limitation—

   a) **Muscle weakness**—a condition in which the muscle power is below functional level. (Problem may be motor, sensory, or disease phenomena.)

   b) **Contracture**—a condition in which a muscle loses ability to relax to its original position. (Problem is limitation of joint range.)

II. For the score one (1)—total assistance:

A. Definition

1. Defined as the inability of the patient to perform any phase of self-care function without assistance from a second person.

III. For the score two (2)—partial assistance:

A. Definition

1. Defined as the ability of the patient to perform some of the phases of the self-care function with limited assistance from a second person.
IV. For the score three (3) -- independent:

A. Definition

1. Defined as the ability of the patient to perform all phases of the self-care function without any assistance from a second person.

Total effort was defined as the second person completing the entire process.

Partial effort was defined as the patient participating in the process with help from the second person.

III. METHOD

The technique used for the study was a structured observation and interview of the total population in two nursing homes. The criteria for observation was structured to a rating scale. The structured observation and the rating scale were devised by the Colorado State Department of Public Health. Both were accepted as devised.

A selected nurse employee in one nursing home was given instruction in simple rehabilitative nursing techniques. In turn the person who received the instruction instructed the personnel of the nursing home where she was employed. The patients were then to receive simple rehabilitative nursing care as part of the daily nursing care. No effort was made in this study to evaluate any differences occurring in the nursing care. Since the purpose of the study was to evaluate the effects of in-service education for nursing personnel on the activity level of the patients before and
after the application of simple rehabilitative nursing care, this was the only evaluation which was done.

Because some change may occur in the activity level of patients without any change in nursing care, the patients of another nursing home were observed on two occasions as a control group.

The two observations of both groups of patients were made four to five months apart. The data on all four observations were obtained by one person.

There was a plan to code the length of dependency; however, this was not feasible because the information largely was not available. Therefore, this was not continued other than to designate dependency in regard to the date of admission to the nursing home.

In the coding, the length of residence was tabulated but not the length of dependency for the reason stated previously.

Religion was not tabulated as it was not viewed as relevant to the purpose of the study.

All of the residents in both nursing homes were white; therefore, the race was not coded.

The number eight (8) item (see Appendix) on the evaluation form was not used as the total population was accepted for the purpose of this study. All patients were evaluated a second time to determine the extent of change in their status of activity.
IV. PREVIEW OF REMAINDER OF THE STUDY

This study provides a review of the literature which the investigator reviewed as it applied to the rehabilitation of patients in nursing homes. The review of the literature is presented in Chapter II.

Chapter III is a description of the structured observation and interview used in accord with the devised rating scale for this study. A description of the nursing homes and the patients who were the subjects for the study is included. A short explanation of the in-service education program for nursing personnel is included.

Chapter IV contains an analysis of the data. The analysis of the data includes:

1. A comparison of the similarities and differences between the subjects of the study group and the control group.

2. A comparison of the total gain scores on the two observations of the study group.

3. A comparison of the total gain scores on the two observations of the control group.

4. A determination of the difference in mean gain scores of the two groups.

Chapter V includes the summary, the conclusions, and the recommendations.
CHAPTER II

REVIEW OF LITERATURE

The literature published between 1948 and 1961 was reviewed for the following purposes: (1) to ascertain current trends and practices in rehabilitation of the aged and chronically ill in nursing homes, (2) to determine the status of nursing care of patients in nursing homes, and (3) to scrutinize stated philosophies of rehabilitation.

A great deal has been written about rehabilitation and its importance as an integral component of the care and treatment of all, including the aged who were chronically ill or disabled, or who were both chronically ill and disabled.

World War II, with the resultant numbers of injured and disabled, stimulated an interest in and created an awareness of the need and necessity for rehabilitation, not only for the injured, but for all persons who were disabled and chronically ill, and for those who were either disabled or chronically ill.

With the increase in the population in the older age group, the community and health disciplines recognized the need for providing some type of medical and nursing care for the aged who were ill. One of the facilities which assumed
utmost importance in the treatment and care of the aged and chronically ill was the nursing home.

I. CURRENT TRENDS AND PRACTICES IN REHABILITATION OF THE AGED IN NURSING HOMES

Several projects had been undertaken in various locales as a means of providing care to meet the nursing rehabilitative needs of the aged and chronically ill patient in nursing homes. The major concerns centered around the maintenance of health, safeguarding the functions which remained, and assisting the person to regain as much function and activity as his limitation would permit. Of equal importance was the program concerned with devising a means for providing the nursing home staff with the information needed to offer nursing rehabilitation care to the patients. These projects pointed out that once the staff of the nursing homes were accepting of nursing rehabilitation,

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and understood how the care could be given, the patients showed improvement in the selected functional areas.4

The literature revealed that the increased recognition and concern over the care of the aged and chronically ill had prompted action in various sections to either improve or provide a higher level of care for these people. Much of this work was done in Public Health Departments and carried out by those who had responsibilities for the supervision and direction of the care provided in nursing homes.

**The White House Conference on Aging**

The United States Government was concerned with the many problems which arose with the increase in the older population. One of the problems which received a great deal of attention was the health of the older age group and their need for rehabilitation.5 As a result, the White House Conference on Aging was held in January, 1961. Preparations for the Conference stimulated public awareness and understanding of the medical needs of the aged and chronically ill.6 One of the major focuses of this Conference was the belief that good health was essential for the maintenance of independence and enjoyment of later years.7 Also, it was


6Ibid. 7Ibid.
pointed out that "promotion and preservation of health and care and restoration of the sick and disabled" was among the most important services required by older people. In order to provide this care and to formulate plans through which the care could be made available, it was recognized that there was urgent need for the health disciplines to develop courses concerned with the aged and the aging process. It was the opinion of the conference participants that those who were in charge of homes for the aged, nursing homes, and other facilities for the aged needed a thorough knowledge of aging and older people.

The organizations and professions concerned with providing care for the aged and in the improvement of existing facilities had planning committees working toward these goals. In addition to the plans for giving adequate medical and rehabilitative care, a very important aspect of the Conference was that it created interest on the part of the community to take constructive action on the current level of care given to many chronically ill and aged.

Population Trends

Within the past few years there had been increasing recognition of the population trend toward the older age group. In the preceding ten years, the aged population,
persons aged sixty-five and older, had increased by nearly 35 percent of the population in this age group in contrast to the total population increase of 18½ percent. The projected figures were that by the year 2000 the total of the aged population would be over thirty million people and that the aged population would more than double in number. It had been estimated that about twenty-eight million individuals of the current population had been disabled because of chronic illness. These changes partially came about because of the advances in medical science and the increased availability of medical care. As a result, there was an increase in chronic illness and its accompanying disability in the older age group.

The older age group has years of valuable experience behind them, and they have skill and knowledge which the nation can not afford to lose. Society needs to convey to the older age group the concept that they are needed, and


13 Ibid., p. 4.


wanted, and that society is willing to provide adequate facilities for their care.\textsuperscript{16}

**Rehabilitation of the Aged**

In recent years there has been more effort expended and plans made to offer more suitable medical and rehabilitation services to the aged who are ill. It is recognized that the neglect of disability would cost far more than an early effective program of rehabilitation which would restore individuals "to the highest possible level of physical, economic, social, and emotional self-sufficiency."\textsuperscript{17} However, the main concern in the rehabilitation of patients in nursing homes is not to prepare them for vocational rehabilitation, but to as nearly as possible train the patient to perform the activities of daily living within the limits of his physical disability. For this study the activities of daily living included the activities which were inherent to the conduct of daily life, such as self-sufficiency in ambulation, washing, eating, dressing, and toilet activities.\textsuperscript{18} Adequate functioning in these activities became the real measure of success. The improvement in these functions is related to the patient's age and his physical condition. Also, the social forces and the psychological conditions are vital factors in determining

\textsuperscript{16}Morrison, \textit{loc. cit.}

\textsuperscript{17}Rusk, and others, \textit{op. cit.}, p. 19.

\textsuperscript{18}\textit{Ibid.}, p. 549.
the degree to which the patient can accomplish and maintain independent status.\textsuperscript{19} For example, it might not be possible for some aged and chronically ill persons to become completely independent since independence in the use of a wheelchair may be all which is practical. The improvement would depend on the total condition of the patient. Thus, the older patient who becomes self-sufficient in various aspects of self-care can have a greater relative gain than a younger person who has returned to work.\textsuperscript{20} It is well known that persons in the older age group who are chronically ill often have multiple illnesses, and these illnesses need to be considered in planning for their care. Such illnesses should not, however, result in exclusion of these persons from the benefits of rehabilitation. Recent experiences have shown that, while such patients often start and progress slowly, the final results are encouraging.\textsuperscript{21}

The task of rehabilitating the disabled is of great proportion. The concept of patient-centered care applies in rehabilitation the same as it does in any other type of medical and nursing care of persons who are ill. For the aged and the chronically ill, it is very important to treat the person as a total personality, a whole person, and a complete individual.\textsuperscript{22}

\textsuperscript{19}Ibid. \textsuperscript{20}Ibid. \textsuperscript{21}Ibid., p. 545. \textsuperscript{22}Alice B. Morrissey, \textbf{Rehabilitation Nursing} (New York: G. P. Putnam's Sons, 1951), p. 62.
Rehabilitation of the Aged and Chronically Ill in Nursing Homes.

First of all, it is necessary that the staff of nursing homes keep in mind that there are relatively few helpless persons. The patients in nursing homes, excluding the unconscious and the delirious, can be taught to participate in their own care. Experience has revealed that aged and disabled people exert much effort to gain independence.

There is an increasing awareness of the necessity of meeting the needs of patients over and above what is termed custodial care. The management and the nursing personnel of some nursing homes have often become better able than the patient's families to administer to the psychological and physical needs of patients. These people believe that the type of care which encourages the patients to attain the goals of self-help should be offered.

A study by Park and Moe, "Rehabilitation Care in Nursing Homes," showed a significant improvement in the patients who received nursing rehabilitative care in comparison to the patients in a control group who did not...


24 Ibid.

25 Ibid.


receive the prescribed care. To facilitate the program of intensive care, it was first necessary to institute a training program for the staff of the nursing homes. Even though the benefits to the patients were appreciable, it was obvious that more recognition was needed in regard to the value of establishing and maintaining an in-service and teaching program. However, it was noted that in most of the participating nursing homes, the program had a positive effect which was "manifested in better nursing service, better morale among both staff and patients, and striking improvements in the physical appearance of the homes." Rehabilitation is a relatively new concept, particularly as it is practiced, and only a few nursing homes have rehabilitation services.

II. TO DETERMINE THE STATUS OF NURSING CARE OF PATIENTS IN NURSING HOMES

The Nursing Home

The nursing home has evolved because of the need for it. The homes have grown without too much planning as the persons who operated nursing homes did not anticipate the needs and demands in relation to medical and nursing care needs of the patients. With these developments, in the past

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28Ibid., p. 611. 29Ibid., p. 612.
two decades, the nursing homes have become "a significant part of this nation's medical care facilities."\(^{30}\)

In 1960, there were 25,000 nursing homes which accommodated 450,000 people.\(^{31}\) More than 20,000 of these facilities were proprietary, or commercially owned. The remainder were under public or nonprofit ownership and accounted for approximately 218,000 beds.\(^{32}\) As the number of nursing home beds approached the number of general hospital beds, the public became more cognizant of the quality of care rendered in these nursing homes. This naturally led to the imposition of increased responsibility on the operators of nursing homes. Responsible agencies and interested people recognized that the training of the nursing home administrator was essential to the improvement of the care of patients in nursing homes.\(^{33}\) Nursing home administrators are now interested in upgrading the quality of care and in devising methods by which this can be brought about. Recognition by the administrator of the problems common to nursing


\(^{31}\)Ibid.


to the ones termed boarding homes which provided only the simplest supportive services. Since it was known that the quality of service in nursing homes needed improvement, the American Nursing Home Association took "a position of leadership toward the goal of higher standards." Legal standards for nursing homes were considered imperative and every state had a licensure program by 1957.

There are several factors which are deterrents to the development of high level care in nursing homes. One of these factors is the cost of care. Sometimes the payment for nursing care of public assistance patients is below the actual cost. Another factor is the difficulty in hiring and retaining good employees. Often there are not enough qualified professional personnel to provide the needed assistance.

One authority stated that about one-half of all patients in nursing homes received some public assistance support for their care. In Colorado, the possibility of revising the bases of payment is being explored as one

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39 Ibid. 40 Ibid.

method of encouraging operators of nursing homes to undertake rehabilitative techniques in the care of their patients.\textsuperscript{42}

In a study by Solon and others\textsuperscript{43} it was revealed that in proprietary nursing homes two out of five had a registered professional nurse employed, and an additional one-fourth of the homes had a licensed practical nurse as the highest skill-level represented. The larger homes tended to have more professionally trained nurses.\textsuperscript{44} The study did reveal extremes in staffing of professional and nonprofessional personnel, but it revealed that the staffing was largely nonprofessional. Untrained nursing personnel constituted about 40 percent of the staff in nursing homes, non-nursing staff was about 30 percent, licensed practical nurses about 20 percent, and registered nurses about 10 percent.\textsuperscript{45}

Since the quality of care is determined by the quality of staff, there has been much concern over the qualifications and skills of the staff in nursing homes. The education of the staff is important in bringing about the improvement of patient care. To assist in this area, the Public Health Service and the American Nursing Home


\textsuperscript{44}Ibid. \textsuperscript{45}Ibid.
Association jointly prepared, published, and distributed a manual, "How to Be a Nursing Aide in a Nursing Home."  

The trend in physical rehabilitation has exploded the belief that disability is the lot of patients in nursing homes. It is encouraging to know that many of the techniques of nursing rehabilitation are simple and can be performed by properly trained nursing aides and orderlies who are under supervision.  

Characteristics of Patients in Nursing Homes  

It is common knowledge that patients in nursing homes are aged and chronically ill. An inventory of nursing homes by Solon and Baney, in 1960, revealed that patients were in the older age group; the average patient was eighty years old. Less than one-tenth of the patients in proprietary nursing homes were under sixty-five years of age.  

Two-thirds of all patients in proprietary nursing homes were women. This was attributed to the greater longevity of women, and to the fact that many more women than men are widowed.  

It was found that less than one-half of the patients could walk alone or with no more help than a cane or crutch,  

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47 Ibid.  
48 Solon and others, op. cit., p. 8.  
49 Ibid., p. 9.
and nearly one-third could not get about at all, even in a wheelchair.\textsuperscript{50} The number of patients who were able to get about with major appliances decreased with age, and the proportion who required the help of an attendant increased with age.\textsuperscript{51}

In regard to bed status, 20 percent of proprietary nursing home patients were completely bed fast. An additional 14 percent were in bed most of the time. Others were in and out of bed for portions of their time, and somewhat less than one-half were normally out of bed.\textsuperscript{52} It was believed that confinement to bed would increase with the age of the patient. The investigators discovered that the disability at any age was a large selective factor for placement of the patient in a nursing home. It was pointed out that:

Some older people enter a nursing home not so much because of a severely disabling condition but rather because of general infirmity or because of social difficulties in housing arrangements.\textsuperscript{53}

It was found that more than one-half of the patients in proprietary nursing homes were disoriented, at least part of the time.\textsuperscript{54} Approximately one out of five of the disoriented patients revealed a state of confusion most of the time. It was found that disorientation showed a decided relationship to age:

\textsuperscript{50}\textit{Ibid.} \hspace{1cm} \textsuperscript{51}\textit{Ibid.} \hspace{1cm} \textsuperscript{52}\textit{Ibid.} \hspace{1cm} \textsuperscript{53}\textit{Ibid.}, p. 11. \hspace{1cm} \textsuperscript{54}\textit{Ibid.}
The proportion of confused patients mounts sharply from about one-fourth of those under 55 years of age, to half of those aged 65-74, and on up to nearly two-thirds of the patients who are 85 and over.\textsuperscript{55}

The study revealed that large numbers of nursing home patients did not have control of elimination. At least one-third were incontinent of urine or feces or both. One-fourth lacked bladder control and bowel control. Approximately 25 percent of patients under fifty-five years of age were incontinent, and the proportion increased among the older age group--up to about 40 percent of those eighty-five years of age and older.\textsuperscript{56}

Cardiovascular diseases were dominant in the older age groups. One in six patients had had a stroke. Other diagnoses in sizeable numbers were fractures (usually hip), arthritis, rheumatism, various forms of paralytic conditions, mental disorders, and diabetes. It was found that some of the recorded diagnoses were not current and, for some of the patients, a diagnosis was not available to the nursing home staff. For these reasons the available information was not completely reliable.\textsuperscript{57}

III. PHILOSOPHIES OF REHABILITATION

A growing realization of the necessity for total care of a patient was evident from the literature. For many years the two major attitudes which prevailed in the work

\textsuperscript{55}Ibid. \hfill \textsuperscript{56}Ibid., p. 13. \hfill \textsuperscript{57}Ibid.
with the elderly were: (1) the older age group should be shut away merely to subsist, and (2) the doctrine of condescension and over-protection. Such attitudes prevented the acceptance and integration of older people into our society. Another belief which prevailed was that many long term patients were beyond help. The people who supported these beliefs did not agree with the evolving medical and nursing philosophy of care for the aged and chronically ill.

The modern concept of rehabilitation is not completely accepted; however, there is evidence of a growing awareness and acceptance by medical, nursing, and other allied disciplines. Thus, one stated philosophy is that:

... proper medical care for the aged today is a positive, individualized program of prevention and rehabilitation, using all available knowledge in the field of medicine, psychiatry, education, and the social sciences.

Currently it is imperative that no sickness or suffering be taken for granted. Efforts must be directed toward the detection of disease, prompt and competent treatment, and rehabilitation programs. It is recognized that, regardless of age and illness, sick people are people first, and patients second. In addition to competent medical and nursing care it is also known that individualized understanding in the social, psychological, and rehabilitative

\[58\text{Kaplan, op. cit., p. 59.}\]  
\[59\text{Ibid., p. 63.}\]  
\[60\text{Ibid., p. 64.}\]
areas are necessary to facilitate recovery of an individual. The progressive nurse is aware of the importance of self-care for the patient to regain self-confidence. The nurse knows that, in the beginning, helping a patient to care for himself takes far more patience and far more time than the old fashioned method of just "giving care."61 The aim of rehabilitation is to help patients gain as much independence as possible.

**Summary**

This review of literature points out the variations in the quality of care in nursing homes. Such inconsistencies apparently resulted from differences in the quality and quantity of the nursing staff. Awareness of the need for the improvement of care brought about genuine efforts directed toward this goal. Also, there is a growing recognition of the need of the patients in nursing homes for simple rehabilitative nursing care. The literature points out that it is evident that the nursing home personnel often lacks complete orientation to the simple rehabilitative nursing care for patients.

61Ibid., p. 65.
CHAPTER III

METHOD AND PROCEDURE OF STUDY

I. THE METHOD

The experimental method was used in this study. Good described the experimental method as follows:

In experimentation the investigator controls (manipulates or changes) certain independent variables and observes the changes that take place in the form of dependent variables.\(^1\)

The method used involved the use of an experimental and a control group in an effort to detect any group changes in the dependent variable due to factors other than the controlled variable. Two sets of observations were made on each group.

If the differences between the two observations for the experimental group are due to intervening historical events, then they should also show up in the results for the control group.\(^2\)

The structured observation with an interview was the technique used in these observations. Selltiz and others described the structured observation as follows:

\ldots was designed to provide systematic description or to test casual hypotheses \ldots the investigator knows what aspects of the group activity are relevant for his


\(^2\)Ibid., p. 366.
research purposes and is therefore in a position to develop a specific plan for the making and recording of observations before he begins collecting data.3

These authors elaborated by saying the structured observation was focused on "...designed aspects of behavior..." and that it was determined "...in advance what kinds of behavior should be observed..." in order to obtain the information necessary to answer the questions.4 Since the situation was already specified for this study, the structured observation limited what could be observed.5

Since the patients used for this study were in two nursing homes within close proximity, all of the observations were done by one observer. The reliability of the data was enhanced by the fact that the observer was familiar with the tool being used. To collect this type of data, the structured observation was the appropriate technique.6

II. THE PROCEDURE FOR THE STUDY

Selection of Sample

The two nursing homes selected for the study were similar in many respects and were willing to participate in the study. The Colorado State Department of Public Health assisted in the selection of the nursing homes.

4Ibid. 5Ibid., p. 223. 6Ibid., pp. 221-224.
All the patients in both nursing homes at the beginning of the study comprised the original sample and were used in the first observation. Only those patients who were present for the first observation were observed during the second observation.

In both nursing homes, the majority of the patients were in the age group from seventy to ninety. There were a few patients in the age groups from sixty to seventy, and from ninety to one hundred.

For the patients observed in this study, cardiovascular diseases were the most frequent diagnosis; fractures and arthritis were next in frequency, and there were a few patients with other diagnoses including diabetes, malignancies, and blindness.

The staffing of the two nursing homes is comparable. Both nursing homes have a registered nurse in charge of the nursing service who is also scheduled for day duty. Both homes employ one licensed practical nurse and nursing aides for all three shifts. However, in the larger nursing home, there are two licensed practical nurses on the evening shift, and in the other nursing home, the owner and manager is a practical nurse and is on duty for twelve hours a day. Consequently, both nursing homes have a licensed practical nurse in charge of the nursing service for the evening and night shifts. In the nursing home with the larger patient census, for the day shift the average number of nursing personnel on duty is eight, on the evening shift the average
number is six, and on the night shift the average number of personnel on duty is three. In the other nursing home, for the day shift the average number of nursing personnel on duty is six, on the evening shift four, and on the night shift three.

Both nursing homes consider the registered nurse and the licensed practical nurses as permanent personnel as most of these persons have been employed since the origin of the homes. In one nursing home, the rate of turnover on nursing aides is approximately 10 percent and, in the other, the rate of turnover is approximately 50 percent. Many of these nursing aides are drawn from a transient student population.

In one nursing home, the director is a lay person and, in the other, the ownership and management is by a licensed practical nurse.

In the two selected nursing homes, both buildings are relatively new. Both of the homes have private and semi-private rooms. In one nursing home there is one four-bed ward and, in the other, there is one four-bed ward and one three-bed ward.

The furniture for the rooms is modern and attractive. The bedside tables are large enough to contain the personal effects of the patients and there are occasional chairs. There are overbed lights, draperies on the windows, and the walls are in pastel colors. The rooms have adjoining bath facilities; however, the main bath and shower rooms are located further down the halls.
Dining room service is offered in both nursing homes. The dining rooms are decorated attractively, and have small tables with flowers on them.

Both nursing homes have guide rails on all the walls in the hallways. The halls are wide to allow for walking and to allow for the mechanical devices used in locomotion.

The lobby of both nursing homes is pleasing and comfortable. The lobbies contain television sets, record players, radios, pictures on the walls, and potted plants.

In both nursing homes, the patients wear their own clothing except for those who are confined to bed. The patient is respected as an individual, and it is recognized that the need to have his own clothing and other personal effects is one way to preserve the dignity of an individual. Other personal items which are often retained by the patients are radios, television sets, photographs, and perhaps a favorite chair.

The bed capacity in one nursing home is thirty-two patients and, in the other, the bed capacity is forty-seven patients.

Description of the In-service Program

The in-service education program in the techniques of simple rehabilitative nursing care was conducted by a member of the Colorado State Department of Public Health.

The in-service education was offered to the registered nurse member of the staff in the nursing home. The classes
in the nursing home for the other members of the nursing staff were conducted by this registered nurse with the assistance of the nursing consultant from the Colorado State Department of Public Health and a physiotherapist who was prepared in rehabilitation. The in-service program was scheduled for twelve classes which amounted to thirty hours of class instruction.

The subject matter taught in the classes included:
(1) instruction in rehabilitation in a nursing home which emphasized the team approach, (2) approach and motivation including the relationship of the activity and rehabilitation nursing areas, (3) rehabilitation nursing in the nursing home which included an introduction to exercise, (4) normal body motions, (5) passive range of motion exercise for patients in bed which included good body alignment and bed positioning, (6) transfer activities, (7) ambulation and walking activities, (8) activities of daily living training, (9) skin care including instruction in personal hygiene, (10) bowel and bladder training, (11) general principles in speech and hearing for nursing home staff, and (12) a summary and review of all the classes.

The method of teaching was by didactic lecture, demonstration, and practice sessions which included return demonstration. For the class on bowel and bladder training, two films were shown on incontinence and rehabilitation of the stroke patient.
Preparation of the Structured Observation

The observations were structured to gain information about individual patient's degree of independence in selected activity levels in six designated functional areas. The functional areas were: (1) transfer, (2) locomotion, (3) dressing, (4) grooming, (5) feeding, and (6) toilet. These functional areas were divided into sub-categories which totalled twenty-one levels of activity. The observations were recorded in accord with a rating scale and observation guide.

The rating scale was a four-point scale which ranged from zero through three. For the zero score, the patient did not perform the activity for one of three reasons:

1. Patient does not have the ability to do self-care activities because he lacks motivation.
2. Patient does not have the physical ability to do self-care activities because he needs to be taught the procedures.
3. Patient had a physical limitation.

For the score one, the patient performed the activity with total assistance from another person; for the score two, the patient had the ability to perform part of the activity with limited assistance from a second person; and for the score three, the patient functioned independently in the performance of the activity and did not require assistance from a second person.

This tool was devised by the Colorado State Department of Public Health and was accepted as devised. (See
Appendix for a copy of the rating scale and the structured observation.

**Use of the Structured Observation**

Each patient in both nursing homes was observed in each activity level in the functional areas designated for this study. The rating was done in accord with the four scores defined in Chapter I.

One selected professional member of the staff in both nursing homes was interviewed in regard to each patient. However, in one nursing home, some of the information about the patient was given by the administrator who was familiar with the condition of the patients. It was necessary to interview a member of the staff in order to verify the information secured verbally from the patients as many of them were confused. The patient demonstrated his ability to function within the level of many of the activity levels. As much time as was necessary was taken with each patient and the staff member to complete each observation.

The interview was structured in that questions were asked concerning each activity level and the ability of the patient to perform at a certain level. The interview brought out information about the patient and his ability, or lack thereof, to care for self. The interview of the patient and the member of the staff was a means of verifying the information about the patient and his performance in a designated activity level.
The observations on the study group were made before and after the nursing personnel had been exposed to in-service education in simple rehabilitative nursing care. The time interval between the first and second observations was five months. For the control group, the nursing personnel was not exposed to in-service education in simple rehabilitative nursing care. For this group, the time interval between the first and second observations was four months.

The second measurement of the study group was made to determine the degree of independence attained by the patients in the nursing home where the staff had been exposed to in-service education. In order to account for changes in the patients which would have occurred without the nursing personnel receiving in-service education, the same measuring device was applied to the patients of the control group in a comparable nursing home.

The number eight (8) item, Disposition of Patient, on the rating scale was not used for this study as the patients in the two samples were evaluated two times.

**Organization of the Data**

Following the observations, the data were transferred to hand-sort cards in accord with a previously designed code. The data were then transferred to a tabulation sheet. The tabulation sheets included the sub-categories of the levels of activity, the age groups, the length of residence, orientation, and the diagnoses. These were used to compare
the patients in each nursing home, and to compare the
patients in both nursing homes.

The data are presented on tables.

The Plan for Analysis

The data obtained from the first observation were
analyzed according to the activity levels of the patients as
a means of comparing the activity level of the patients in
the two nursing homes. For the data obtained in the second
observation, the activity levels of the patients were
compared with the first observations, and there was a
comparison between the patients in both nursing homes in
order to determine the changes and the degree of the changes
in the two groups.

Summary

The experimental method with a control and a study
group was used for this study. The technique used for
gathering data was a structured observation and interview.

The observations were made on each patient in accord
with six designated functional areas which were sub-divided
into twenty-one activity levels. The interview was with a
selected member of the nursing personnel and was conducted
for the purpose of obtaining information about each patient
in order to enhance the reliability of the data.

The structured observation was recorded on a four-
point rating scale which ranged from zero through three.
Both were designed by the Colorado State Department of Public Health.

The two nursing homes selected for the study were similar in structure, accommodations, and staffing pattern. The patients in the nursing homes were comparable in age and diagnoses.

The patients in one nursing homes were used as a study group and the patients in the other were used as a control group. The nursing personnel of the study group had been exposed to in-service education in simple rehabilitative nursing care. To determine the patient's degree of independence and to account for changes which would have occurred without instruction of the personnel, both groups were measured before and after the nursing personnel for the study group had been exposed to in-service education.
CHAPTER IV

PRESENTATION AND ANALYSIS OF DATA

The data collected for this study are presented and analyzed in this chapter. The data were collected by means of a structured observation and interview with a selected staff member regarding the patients in two selected nursing homes to determine the activity level of the patients in six designated functional areas which had been sub-divided into twenty-one activity levels.

The six designated functional areas were: transfer, locomotion, grooming, dressing, feeding, and toilet. These functional areas were sub-divided into the following twenty-one activity levels: (1) flat position change (including turning and moving from side to side or up and down), (2) sitting position (trunk upright with legs in bed), (3) dangling position (trunk upright with legs over edge of bed), (4) bed to chair (including both regular chair and wheelchair), (5) wheelchair to other chair, toilet or bench (including bench used for shower or tub), (6) wheelchair to bathtub, (7) wheelchair to parallel bars, crutches, or cane (this may include an arm chair rather than a wheelchair), (8) bed to crutches or cane, (9) locomotion by wheelchair, (10) locomotion by crutches, (11) locomotion by cane, (12) locomotion by walker, (13) walking without mechanical
aid, (14) dressing, (15) undressing, (16) bathing, (17) combing hair, (18) applying make-up or shaving, (19) care of teeth, (20) feeding self, and (21) toilet.

The data for the activity levels are presented by a total score for each patient. This score was calculated through the assignment of a value number to the four scores by which the patient was rated. The patient's degree of independence was scored for each activity level. The range of the scoring was from zero to sixty-three.

A comparison of the total scores for each patient in the activity levels is presented. Also a comparison between the first and second measurement in the two groups studied is presented.

For the study group, the first observation included a total of forty-six patients. The second observation was conducted five months later. During the ensuing period, six of the patients expired, and five of the patients were discharged. For the study group, the patients used in the sample totalled thirty-five.

For the control group, the first observation included a total of thirty-two patients. The second observation was conducted four months later. During the ensuing period, four of the patients expired, and two of the patients were discharged. For the control group, twenty-six patients were included in the sample.

The total number of subjects for the study was sixty-one.
I. CHARACTERISTICS OF PATIENTS IN SPECIFIED CATEGORIES

The patients who participated in the study were categorized into age groups, diagnoses, orientation, and the length of residence in the nursing home. The number of patients and the percent of patients in each of these four categories is presented for the two groups. The number and the percent of the total number of participants is presented for each category in Table I, pages 42 and 43.\(^1\)

**Age Groups**

The study group was comprised of thirty-five patients. Of these thirty-five patients, one or 3 percent was from forty to fifty-nine years of age, three or 9 percent were from sixty to sixty-nine years of age, thirteen or 37 percent were from seventy to seventy-nine years of age, thirteen or 37 percent were from eighty to eighty-nine years of age, and five or 14 percent were from ninety to one hundred years of age.

The control group was comprised of twenty-six patients. Of these twenty-six patients, one or 4 percent was from sixty to sixty-nine years of age, six or 23 percent were from seventy to seventy-nine years of age, sixteen or 62 percent were from eighty to eighty-nine years of age, and three or 11 percent were from ninety to one hundred years of age.

\(^1\)The percentages for these four categories were computed to the nearest whole number.
<table>
<thead>
<tr>
<th>Categories of Characteristics</th>
<th>Study Group&lt;sup&gt;1&lt;/sup&gt;</th>
<th>Control Group&lt;sup&gt;2&lt;/sup&gt;</th>
<th>Total Sample&lt;sup&gt;3&lt;/sup&gt;</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Tot. in Numbers</td>
<td>Percent</td>
<td>Tot. in Numbers</td>
</tr>
<tr>
<td>Age Groups</td>
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<tr>
<td>40-59</td>
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<td>60-69</td>
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<td>70-79</td>
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<td>80-89</td>
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<td>90-100</td>
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<td>14</td>
<td>3</td>
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<td>Diagnosis--Primary</td>
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<td>Cardiovascular Diseases</td>
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<td>Diabetes</td>
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<tr>
<td>Senility</td>
<td>4</td>
<td>11</td>
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</tr>
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<td>Other</td>
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<td>14</td>
<td>3</td>
</tr>
<tr>
<td>No Diagnosis</td>
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<td>--</td>
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</tr>
</tbody>
</table>

NOTE: Percentages computed to the nearest whole number.

<sup>1</sup>Study Group comprised 35 patients.

<sup>2</sup>Control Group comprised 26 patients.

<sup>3</sup>Total sample comprised 61 patients.
<table>
<thead>
<tr>
<th>Categories of Characteristics</th>
<th>Study Group&lt;sup&gt;1&lt;/sup&gt;</th>
<th>Control Group&lt;sup&gt;2&lt;/sup&gt;</th>
<th>Total Sample&lt;sup&gt;3&lt;/sup&gt;</th>
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<td>Percent</td>
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<td>Fair</td>
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<tr>
<td>Poor</td>
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<td>7</td>
</tr>
<tr>
<td>None</td>
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<td>9</td>
<td>2</td>
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<tr>
<td>Length of Residence</td>
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<tr>
<td>0-5 months</td>
<td>7</td>
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<td>8</td>
</tr>
<tr>
<td>6-11 months</td>
<td>18</td>
<td>51</td>
<td>3</td>
</tr>
<tr>
<td>1-2 years</td>
<td>10</td>
<td>29</td>
<td>15</td>
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</table>

NOTE: Percentages computed to the nearest whole number.

<sup>1</sup>Study Group comprised 35 patients.

<sup>2</sup>Control Group comprised 26 patients.

<sup>3</sup>Total Sample comprised 61 patients.
For the sixty-one patients who participated in this study, one or 2 percent was from forty to fifty-nine years of age, four or 7 percent were from sixty to sixty-nine years of age, nineteen or 31 percent were from seventy to seventy-nine years of age, twenty-nine or 48 percent were from eighty to eighty-nine years of age, and eight or 13 percent were from ninety to one hundred years of age.

Diagnoses

In the study group, it was found that eleven or 31 percent of the patients had a diagnosis of cardiovascular disease which included cardiac disorders and cerebral and general arteriosclerosis; three patients or 9 percent were diagnosed hemiplegia from cerebral vascular disease; five or 14 percent had fractures; four or 11 percent had arthritis; three or 9 percent had diabetes; four or 11 percent were diagnosed as senile; and five or 14 percent had varied diagnoses including carcinomas, malnutrition, and blindness.

For the control group, nine or 35 percent of the patients had a diagnosis of cardiovascular disease; three or 11 percent had hemiplegia from cerebral vascular disease; six or 23 percent had fractures; two or 8 percent had arthritis; one or 4 percent had diabetes; three or 11 percent had varied diagnoses including blindness and malignancy; and for two or 8 percent no diagnosis was available.
These findings revealed that for the sixty-one patients, twenty-six or 43 percent had cardiovascular disease, and that six of these patients had had a cerebral vascular accident. Of the others, eleven or 18 percent had fractures, six or 10 percent had arthritis, four or 7 percent had diabetes, four or 7 percent were diagnosed as senile, eight or 13 percent had miscellaneous diagnoses, and two or 3 percent of the patients did not have a diagnosis available.

Many of the patients had multiple diagnoses; however, for this study only the primary diagnosis was used.

**Orientation**

In the study group, eighteen or 51 percent of the patients had good orientation, seven or 20 percent had fair orientation, seven or 20 percent were poorly oriented, and three or 9 percent were out of contact.

For the control group, eight or 31 percent of the patients had good orientation, nine or 35 percent had fair orientation, seven or 27 percent had poor orientation, and two or 8 percent of the patients were out of contact.

For the sixty-one patients who participated in the study, twenty-six or 43 percent had good orientation, sixteen or 26 percent had fair orientation, fourteen or 23 percent had poor orientation, and five or 8 percent of the patients were out of contact.
Length of Residence

For the study group, seven or 20 percent of the patients had been in the nursing home for five months or less, eighteen or 51 percent had been in residence for six to eleven months, and ten or 29 percent had been in the nursing home for one to two years.

The findings for the control group were that eight or 31 percent of the patients had been in the nursing home for five months or less, three or 11 percent had been in residence from six to eleven months, and fifteen or 58 percent had been in the nursing home for one to two years.

For the total of sixty-one patients, fifteen or 25 percent of them had been in the nursing homes for five months or less, twenty-one or 34 percent had been in residence for six to eleven months, and twenty-five or 41 percent had been in a nursing home for one to two years.

Summary of Analysis of Characteristics in Specified Categories

For the patients in this study, it was revealed that forty-eight of the sixty-one subjects were from seventy to ninety years of age, and that eight of them were over ninety years of age. These findings support the common knowledge that the majority of patients in nursing homes are in the older population group.

Nearly one-half of the patients in this study have cardiovascular diseases; fractures, arthritis, and diabetes
were next in frequency. Since only the primary diagnosis was recorded for these patients, this did not reveal that many of the other patients had a secondary diagnosis of arteriosclerosis or cardiovascular disease. With these chronic and disabling diseases, it seems apparent there should be emphasis on the restoration of function, the maintenance of current function, and the prevention of unnecessary disability.

The data revealed that twenty-six of the sixty-one patients in this study have good orientation, and the remainder have fair or less than fair orientation. It seems apparent that the orientation of the patient is a major factor in the care of patients in nursing homes.

In this study, the findings revealed that these patients have remained in a nursing home for a long period of time. This lengthy residence offers the nursing personnel the opportunity to assist the patient to function to the utmost within his capacity to perform, and to assist the patient in maintaining a state of independence in self-care activities.

II. COMPARISON OF THE SCORES ON ACTIVITY LEVEL FOR THE STUDY GROUP AND THE CONTROL GROUP

Comparison of Individual Scores on Activity Level for the Study Group on the First and Second Observations

Table II, pages 48 and 49, presents a comparison of the individual scores on the activity level for each patient
<table>
<thead>
<tr>
<th>Patient</th>
<th>Total Score 1st Obs.</th>
<th>Total Score 2nd Obs.</th>
<th>Difference in Total Scores</th>
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<td>3</td>
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<td>0</td>
</tr>
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<tr>
<td>30</td>
<td>63</td>
<td>63</td>
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</tr>
</tbody>
</table>

<sup>a</sup>This patient has cataracts resulting in progression of impaired vision between first and second observation.

<sup>b</sup>This patient had progression of cerebral vascular insufficiency between first and second observation.

<sup>c</sup>This patient had become morose because of family difficulty between first and second observation.

<sup>d</sup>This patient had a cerebral vascular accident between first and second observation.
TABLE II (continued)

<table>
<thead>
<tr>
<th>Patient</th>
<th>Total Score 1st Obs.</th>
<th>Total Score 2nd Obs.</th>
<th>Difference in Total Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>31</td>
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<tr>
<td>35</td>
<td>32</td>
<td>28</td>
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</tbody>
</table>

Total Score: 1648  1759  130
Mean Score: 47.08  50.25  3.71

^eThis patient had three cerebral vascular accidents between first and second observation.
in the study group for the first and second observation. A score of sixty-three was the highest score which could be attained.

Of the thirty-five patients in the study group, fourteen of these patients scored sixty-three on the first observation. Of these fourteen patients, thirteen scored sixty-three on the second observation, and one patient scored fifty-eight. The thirteen maintained their independence in self-care, and the one patient who scored less was becoming worse due to cerebral vascular insufficiency. This patient required assistance with bathing and shaving.

Of thirty-five patients in this sample, five scored less than on the first observation. These five included the previously mentioned patient who lost complete independence, one who had become morose because of family difficulty, two who had additional cerebral vascular accidents, and one who was becoming blind. The total loss in scores was nineteen points.

For the study group, eleven of the patients showed improvement in some of the activity levels comprising a gain of 130 points for this group. For these eleven patients, five improved markedly; one patient gained thirty-five points, one gained twenty-nine points, one gained twenty points, one gained sixteen points, and one gained ten points. The other six patients made gains ranging from one point to six points each.
For this sample, thirteen patients maintained their independence in self-care activities, eleven showed gains in independence, six remained the same and still required assistance, and five of the patients became worse.

The mean scores on activity level for the study group were 47.08 for the first observation, and 50.25 for the second observation. The mean gain score between the first and second observation was 3.71.

**Comparison of Individual Scores on Activity Level for the Control Group on the First and Second Observations**

Table III, page 52, presents a comparison of the individual scores on activity level for each patient in the control group for the first and second observations. A score of sixty-three was the highest score which could be attained.

Of the twenty-six patients in the control group, two of these patients scored sixty-three on the first and second observations.

For these twenty-six patients, three scored less on the second observation than on the first, comprising a total loss of eight points. One of these patients was becoming progressively weaker and was confined to bed; the second was worse because of arthritis, and the third was less active because of severe heart disease.

For the control group, thirteen of the patients remained unchanged and continued to require assistance in the performance of self-care activities.
## TABLE III

CONTROL GROUP: COMPARISON OF INDIVIDUAL SCORES IN FIRST AND SECOND OBSERVATION

<table>
<thead>
<tr>
<th>Patient</th>
<th>Total Score 1st Obs.</th>
<th>Total Score 2nd Obs.</th>
<th>Difference in Total Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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<tr>
<td>26</td>
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<td>18</td>
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</tr>
</tbody>
</table>

**Total Score** 996 1047 59

**Mean Score** 38.30 40.26 2.02

<sup>a</sup>This patient became progressively weaker between first and second observation.

<sup>b</sup>This patient had become less active because of severe heart disease between first and second observation.

<sup>c</sup>This patient had become worse because of arthritis between first and second observation.
Of the twenty-six patients in this sample, eight of the patients showed improvement. Marked improvement was evident in two of these patients; one patient gained twenty-three points, and the other gained fifteen points. For the remaining six patients, the gain scores ranged from one to six each. The total gain in scores was fifty-nine.

For these twenty-six patients, two maintained their independence in self-care activities, eight of the patients showed gains in independence, thirteen remained the same and still required assistance, and three of these patients became worse.

The mean scores on activity level for the control group were 38.30 for the first observation, and 40.26 for the second observation. The mean gain score between the first and second observation was 2.02.

**Comparison of Scores on Activity Level for the Two Groups**

Table IV, page 54, presents the mean scores for the two groups. The mean scores on activity level for the first observation were 47.08 for the study group and 38.3 for the control group. On the second observation the mean score for the study group was 50.25 and 40.26 for the control group. The mean gain score between the first and second observation for the study group was 3.71 and 2.02 for the control group. The two groups showed a difference of 1.69 points in mean gain scores in the direction of the study group.
Summary of Scores on Activity Level for the Two Groups

For the sixty-one patients in this study, a total of thirteen patients in the study group maintained independence in activity level, eleven of the patients showed gains in activity level, six remained the same and still required assistance, and five of the patients became worse. For the control group, two patients maintained their independence in activity level, eight showed gains in independence, thirteen remained the same and still required assistance, and three of these patients became worse.

TABLE IV


<table>
<thead>
<tr>
<th>Groups</th>
<th>No. of Patients</th>
<th>Mean Score 1st Obs.</th>
<th>Mean Score 2nd Obs.</th>
<th>Difference in Mean Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study Group</td>
<td>35</td>
<td>47.08</td>
<td>50.25</td>
<td>3.71</td>
</tr>
<tr>
<td>Control Group</td>
<td>26</td>
<td>38.30</td>
<td>40.26</td>
<td>2.02</td>
</tr>
</tbody>
</table>

For the total sample, nineteen patients showed gains in activity level. It appears significant that, for the study group, eleven patients gained 130 points and that, for the control group, eight patients gained 59 points. For both groups, the number of patients who showed gains were not equal; however, the gain per patient for the study group was larger than the gain per patient for the control group.
For the study group, the score for six patients who required assistance remained the same and, for the control group, the score for thirteen patients who required assistance remained the same. The sample was small; however, for the study group there was a greater proportion in gain than there was for the patients in the control group.

For the study group, five patients lost a total of nineteen points, and for the control group, three patients lost a total of eight points. The patients in both groups became worse because of progression of illness. However, the losses for both groups are comparable because of the difference in the number of the patients in the two groups. The patients in the study group made a greater gain than the patients in the control group even though the gain was small.

Summary

The patients in both the control and the study group were classified into four specified categories which included the age groups, diagnosis, orientation, and the length of residence in the nursing home.

The majority of the participants in this study were in the older age groups. Of the sixty-one patients used for the study, forty-eight or 79 percent were from seventy to ninety years of age. Only one patient or 2 percent was from forty to sixty years of age, and eight or 13 percent of the patients were from ninety to one hundred years of age.
Nearly one-half of the patients in this study have cardiovascular disease; fractures, arthritis, and diabetes were next in frequency. These chronic and disabling diseases emphasize the necessity of restorative and preventive measures in the nursing care of patients in nursing homes.

Of the sixty-one patients in this study, twenty-six or 43 percent had good orientation, and the remainder had fair or less than fair orientation. This seemed to indicate that less than average orientation was a major characteristic of the patients in the nursing homes studied.

The data revealed that the majority of patients remain in a nursing home for a long period of time. This lengthy residence of the patients can be utilized by the nursing personnel in assisting the patient to maintain or regain as much independence in function as the individual situation permits.

From the scores of the individual patients in the study group and the control group, the patients in the study group made a greater gain in independence than the patients in the control group. The number of patients in the two samples were not the same. However, in the study group, eleven patients gained 130 points, and in the control group, eight patients gained 59 points. The two groups showed a difference of 1.69 points in mean gain scores which was in the direction of the study group.
CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

I. SUMMARY OF THE STUDY

The problem of the study was to determine the effect of in-service education for nursing personnel in simple rehabilitative nursing care, on the activity level of patients in nursing homes.

The purposes of this study were: (1) to observe the present activity level of the total population in a selected nursing home according to a rating scale devised by the Colorado State Department of Public Health, and (2) to reevaluate the activity level of the same patients after the nursing personnel caring for them had been exposed to in-service education in simple rehabilitative nursing care.

The literature was reviewed for the following purposes: (1) to ascertain current trends and practices in rehabilitation of the aged and chronically ill in nursing homes, (2) to determine the status of nursing care of patients in nursing homes, and (3) to scrutinize stated philosophies of rehabilitation.

The experimental method was used with a structured observation and interview as the technique for the collection of the data. The structured observation consisted of
activity levels in designated functional areas which were: (1) transfer, (2) locomotion, (3) dressing, (4) grooming, (5) feeding, and (6) toilet. These functional areas were sub-divided into twenty-one levels of activity. The observations of the patients were made in accord with the designated levels of activity and were recorded on a four point rating scale.

The samples for the study consisted of thirty-five patients in a study group and twenty-six patients in a control group. These two groups were in two selected nursing homes.

The participants in the study were evaluated on four selected characteristics which were: (1) age groups, (2) diagnosis, (3) orientation, and (4) length of residence in the nursing home. The data were analyzed to determine the number of patients and the percent of patients in these four-selected categories.

The data for the activity levels were analyzed by scoring each patient in his degree of independence for the designated activity level. These data revealed that for the study group a total mean score gain was 3.71, and for the control group a total mean score gain was 2.02. The difference in the mean score between the study group and the control group was 1.69 with the gain in the direction of the study group.
II. CONCLUSIONS

On the basis of the data obtained in this study, the following conclusions were made:

1. In reference to the four selected characteristics which were analyzed, patients in these two nursing homes were in the older age group, were chronically ill with a disabling disease, had a greater potential for faulty orientation, and remained in a nursing home for a long period of time.

To the extent that the patients in these samples are representative of the general population in nursing homes, the conclusion may be drawn that these characteristics are common to all nursing home residents and would therefore influence their activity levels.

2. The patients who were exposed to simple rehabilitative nursing care exhibited a slightly greater gain than those who were not exposed to such care. Although this gain was small, it nevertheless exhibited some progress.

III. RECOMMENDATIONS

The following recommendations were made on the basis of this study:

1. That in-service education programs be instituted to acquaint the nursing personnel in nursing homes with the techniques of simple rehabilitative nursing care.
2. The results of the study indicated that the recipients of simple rehabilitative nursing derived some gain from this care. In view of this, the recommendation is made that the study be extended to obtain information on the activity level of a larger sample of patients in nursing homes to determine the degree of independence attained as a result of simple rehabilitative nursing care.

3. The in-service education program be continued in the nursing home of the study group and, within six months, the activity level of the patients be reevaluated.

4. Consideration be given to the effect on job satisfaction and morale of the nursing personnel exposed to this type of in-service education.
There is no page 61 in this thesis.
BIBLIOGRAPHY

A. BOOKS


B. PERIODICAL ARTICLES


Randall, Ollie A. "Nursing Care of the Aged," Nursing World, 130:10-12, April, 1956.


C. PUBLICATIONS OF THE GOVERNMENT


D. UNPUBLISHED MATERIALS


E. NEWSPAPERS

APPENDIX
RATING SCALE

I. For the score zero (0)—does not:
   A. Definition
      1. Patient does not have the ability to do self-care activities because he lacks motivation. (Absence of patient motivation.)
      2. Patient does not have the physical ability to do self-care activities because he needs to be taught the procedures. (Nurse-teacher role.)
      3. Patient has a physical limitation--
         a) Muscle weakness—a condition in which the muscle power is below functional level. (Problem may be motor, sensory, or disease phenomena.)
         b) Contracture—a condition in which a muscle loses ability to relax to its original position. (Problem is limitation of joint range.)

II. For the score one (1)—total assistance:
   A. Definition
      1. Defined as the inability of the patient to perform any phase of self-care function without assistance from a second person.

III. For the score two (2)—partial assistance:
   A. Definition
      1. Defined as the ability of the patient to perform some of the phases of the self-care function with limited assistance from a second person.

IV. For the score three (3)—independent:
   A. Definition
      1. Defined as the ability of the patient to perform all phases of the self-care function without any assistance from a second person.
Total effort was defined as the second person completing the entire process.

Partial effort was defined as the patient participating in the process with help from the second person.
GUIDE - FUNCTIONAL AREAS

A. TRANSFER

Bed:

1. Flat position change (including turning and moving from side to side or up and down.)
   *T.A.—all changes require total effort by second person.
   **P.A.—changes require partial effort by the second person such as rearrangement of extremities after patient has changed position by rolling of self.
   Independent—patient manages all changes by self.

2. Sitting position—(trunk upright with legs in bed.)
   T.A.—change of position from flat to sitting requires total effort of second person.
   P.A.—change of position from flat to sitting requires partial effort by second person.
   Independent—patient manages change of position by self.

3. Dangling position (trunk upright with legs over edge of bed.)
   T.A.—change of position from flat to sitting with legs flexed over side of bed requires total effort of second person.
   P.A.—change of position from flat to sitting with legs flexed over side of bed requires partial effort by second person.
   Independent—patient manages changes of position by self.

4. Bed to chair (includes both regular chair and wheelchair.)
   T.A.—change of state from bed to chair requires total effort of second person.
   P.A.—change of state from bed to chair requires partial effort by second person.
   Independent—patient manages change from bed to chair by self.

*Total Assistance
**Partial Assistance
5. **Wheelchair to other chair, toilet or bench** (This includes bench used for shower or tub.)
   - **T.A.**—change of state from wheelchair to other chair, etc., requires total effort of second person.
   - **P.A.**—change of state from wheelchair to other chair, etc., requires partial effort of second person.
   - Independent—patient manages change from wheelchair to chair, etc., by self.

6. **Wheelchair to bathtub.**
   - **T.A.**—change of state from wheelchair to bathtub requires total effort of second person.
   - **P.A.**—change of state from wheelchair to bathtub requires partial effort of second person.
   - Independent—patient manages change from wheelchair to bathtub by self.

7. **Wheelchair to parallel bars, crutches or cane** (This may include an arm chair rather than wheelchair.)
   - **T.A.**—change of state from wheelchair to parallel bars, crutches or cane requires total effort of second person.
   - **P.A.**—change of state from wheelchair to parallel bars, crutches or cane requires partial effort of second person.
   - Independent—patient manages change from wheelchair to parallel bars, crutches, cane by self.

8. **Bed to crutches or cane.**
   - **T.A.**—change of state from bed to crutches or cane requires total effort of second person.
   - **P.A.**—change of state from bed to crutches or cane requires partial effort of second person.
   - Independent—patient manages change from bed to crutches or cane by self.

**B. LOCOMOTION**

1. **Wheelchair**
   - **T.A.**—moving by wheelchair from one place to another requires total effort of second person.
   - **P.A.**—patient manages moving by wheelchair from one place to another on flat surface but requires effort of second person for doors, door jams or slanting surface.
1. Wheelchair (continued)
   Independent—patient manages total wheelchair ambulation by self.

2. Crutches
   T.A.—patient requires the efforts of second person for stability and ambulation on crutches.
   P.A.—patient manages ambulation on crutches on the flat surface but requires effort of second person for doors, stairs and slanting surface.
   Independent—patient manages total crutch ambulation by self.

3. Cane
   T.A.—patient requires the efforts of second person for support at all times he is using cane for ambulation.
   P.A.—patient manages ambulation with cane on all flat surfaces but requires effort of second person for stair ambulation.
   Independent—patient manages total cane ambulation by self.

4. Walker
   T.A.—patient requires the efforts of second person for support at all times he is using walker for ambulation.
   P.A.—patient manages ambulation with walker on all flat surfaces but requires effort of second person for doors and slanting surface.
   Independent—patient manages total walker ambulation by self.

5. Walking without mechanical aid
   T.A.—patient requires the efforts of second person for support at all times he is walking without mechanical aid.
   P.A.—patient manages walking without mechanical aid on flat surfaces but requires effort of second person for stairs or slanting surface.
   Independent—patient manages total walking without mechanical aid by self.

C. DRESSING

1. Dressing
   T.A.—patient requires total effort by second person for dressing.
1. **Dressing** (continued)
   - **P.A.**—patient requires partial effort by second person for dressing such as tying shoes, buttons, zippers, etc.
   - **Independent**—patient manages all dressing by self.

2. **Undressing**
   - **T.A.**—patient requires total effort by second person for undressing.
   - **P.A.**—patient requires partial effort by second person for undressing.
   - **Independent**—patient manages all undressing by self.

### D. GROOMING

1. **Bathing**
   - **T.A.**—patient requires total effort by second person for complete bath.
   - **P.A.**—patient requires partial effort by second person for complete bath (patient may be able to manage bathing of face, hands, arms and to waist but second person must complete lower part of body and extremities.)
   - **Independent**—patient manages complete bath by self.

2. **Hair**
   - **T.A.**—patient requires total effort by second person to comb hair.
   - **P.A.**—patient requires partial effort by second person to comb hair.
   - **Independent**—patient manages hair by self.

3. **Make-up or Shaving**
   - **T.A.**—patient requires total effort by second person to apply make-up or shave.
   - **P.A.**—patient requires partial effort by second person to apply make-up or shave.
   - **Independent**—patient manages application of make-up or shaving by self.

4. **Teeth**
   - **T.A.**—patient requires total effort by second person to clean teeth.
   - **P.A.**—patient requires partial effort by second person to clean teeth.
   - **Independent**—patient manages cleaning teeth by self.
E. FEEDING
T.A.—patient requires total effort by second person to feed him or her.
P.A.—patient requires partial effort by second person to feed him or her such as cutting food, buttering bread, etc.
Independent—patient manages eating by self.

F. TOILET
T.A.—patient requires total effort by second person to care for toileting needs.
P.A.—patient requires partial effort by second person to care for toileting needs such as help with clothing, etc.
Independent—patient manages toileting needs by self.
NURSING EVALUATION

PATIENT'S NAME_______________________________

NURSING HOME:__________________________________________________

Lgth of Res (Circle) 0-5 mos 6-11 mos 1-2 yrs 3-5 yrs over 5

1. BIRTHDATE____________________________ 2. SEX__________________

3. MARITAL STATUS (Circle) S M W D

4. RACE (Circle) White Non-White

5. RELIGION (Circle) P C H Other_______________________________

6. DIAGNOSIS (Specify) 1. Primary__________________________
   2. Secondary__________________________________

7. PATIENT EVALUATION - FUNCTIONAL AREAS
   (First space to be used for rating scale; second space to be used for coding length of dependency)
   
A. TRANSFER: 1 2 3 4 5 6 7 8

B. LOCOMOTION: 1 2 3 4 5

C. DRESSING: 1 2

D. GROOMING: 1 2 3 4

E. FEEDING: 1

F. TOILET: 1

G. CONTACT AND ORIENTATION:
   Good ___ Fair ___ Poor ___ None ___
8. DISPOSITION OF PATIENT

A. Accepted________________

B. Not Accepted (Check reason)
   
   ________a) Full ADL - No disability
   ________b) Life expectancy under one year
   ________c) Contraindication: State______________
   ________d) Totally disoriented - no contact
   ________e) Opposed to participation
   ________f) Other (Specify)____________________

9. COMMENTS:

2-9-62