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COUNSELOR AND STUDENT PERCEPTION IN  
RELATION TO A NURSING MODEL

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A Dissertation  
Presented to  
the Faculty of the Graduate School  
University of the Pacific

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In Partial Fulfillment  
of the Requirements for the Degree  
Doctor of Education

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by

Marcy Payne

October 1970

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1970

This dissertation, written and submitted by

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Dated November 18, 1970

## COUNSELOR AND STUDENT PERCEPTION IN RELATION TO A NURSING MODEL

### Abstract of Dissertation

The purpose of this study was to assess the perceptions of counselors, vocational nursing students, and associate degree nursing students in three community colleges, and baccalaureate degree nursing students at two universities, in relation to a nursing education model. The nursing education model encompassed two areas: (1) characteristics of the vocational nursing, associate degree nursing, and baccalaureate degree nursing programs, and (2) occupational functioning of the graduates of these programs. This model was constructed from the established position on nursing education and graduate function, as taken by the American Nursing Association and the California League for Nursing. In addition, the three student groups were compared on certain characteristics.

The basic data were collected by administering questionnaires to thirty-eight counselors, ninety nine vocational nursing students, one hundred thirty-two associate degree nursing students, and seventy-six baccalaureate degree nursing students, for a total of 345 subjects. Non-parametric statistical measures were used. Chi square was used for categorical comparisons and the Kruskal-Wallis one-way analysis of variance by ranks was used in treatment of the data having ordinal measurement. Post hoc comparisons based on a Chi square analogue of Scheffé's multiple comparisons were used to distinguish differences between groups. The probability arbitrarily selected as the minimally acceptable level of significance for statistical computations in the study was that of .05.

The conclusions drawn from the applied statistical measures indicate that in relation to a model of program characteristics, the baccalaureate degree nursing students were significantly closer to the model than the vocational nursing students, or the associate degree nursing students. The counselors were more knowledgeable than were the associate degree nursing students about the characteristics of the three nursing programs as exemplified by a model. The associate degree nursing students were closer to the model on occupational functioning of program graduates than were the vocational students or the counselors. Comparisons of the students showed the vocational nursing students to be older, from a lower family income level, with a larger number that had been in the lower half of their high school graduating class, and with some non-high school graduates in this group. The associate degree students were the most heterogeneous with a range from the higher level of family income to the lower. Their father's educational level ranged from high to low, as did the students' position in the high school graduating class. The associate degree nursing students were nearer to the vocational nursing students in age. The baccalaureate degree students were the youngest group, with a larger family income and a higher educational level of their fathers. None of this group had ranked in the lower half of the high school graduating class. Data obtained by the interview method indicated the students' degree of confidence in her own capabilities strongly affected her choice of program.

Recommendations for further action on the basis of this study are as follows: (1) study the value of different orientation approaches concerning the characteristics of nursing programs and the role of the graduates of the different nursing programs, (2) study of existing types of information about the different nursing programs being disseminated to prospective students and counselors, particularly within the community college, (3) favorable consideration should be given by nursing educators to methods of providing within nursing education programs a continuum more conducive to efficient upward mobility, (4) study should be made of the degree of self-confidence expressed by the student, and its relationship to her nursing program selection, and (5) determine if greater dissemination of nursing program information would aid the community college counselor, or if his need for nursing information is no greater than for any other occupational field.

## ACKNOWLEDGMENTS

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Joseph Blanchard, President, San Joaquin Delta College, Sister M. Gabriel, O.P., Administrator, St. Joseph's Hospital, and Jim Shannon, Research Department, Stockton Unified School District offered continuous support and assistance.

This study could not have been accomplished without the invaluable assistance of many individuals at the five cooperating institutions. The writer is especially indebted to the following: Max Barber, Dean of Counseling, San Joaquin Delta College; Dan Boyd, Dean of Counseling, Modesto Junior College; Dorothy Carvalho, Nursing Administrator, Modesto Junior College; Marjorie S. Dunlap, Dean, School of Nursing, University of California, San Francisco; Paul C. Gould, Dean of Counseling, Sacramento City College; Barbara F. Lafferty, Associate Degree Nursing Administrator, Sacramento City College; Grace E. Ringressy, Nursing Administrator, Stanford University; Violet Torres, Nursing Administrator, San Joaquin Delta College; Lena Visintainer, Vocational Nursing Administrator, Sacramento City College;

Special tribute must be paid to the faculty of the five schools who so generously assisted in this study and to the thirty-eight counselors, and to the 307 nursing students whose willingness to participate in the collection of data made the study a reality.

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## CHAPTER I

### INTRODUCTION

#### I. THE PROBLEM

Concerns of nursing education. Today our nation is going through the most rapid and critical social changes with respect to health and health services in its history. Changes which have occurred in the population and in the practice of medicine have complicated the problem. In addition to the growing population, changes in the characteristics of the population in which more dependent very young and very old require more care, are coupled with rising educational and economic levels leading to greater utilization of health care among all age groups. This growth in the demand for health care is also reflected in the rising number of workers in the health occupations, but even this large growth has not been great enough to keep pace with the need.<sup>1</sup>

With the increasing concern as to how best to meet the health needs of the nation, more attention has been given to the problem of shortages in the nursing field. It is visualized by the Department of Labor that the need for health service personnel will rise sharply in the coming decade.<sup>2</sup> Projections of predicted shortages of hundreds of

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<sup>1</sup>U. S. Public Health Service, Toward Quality in Nursing, Report of the Surgeon General's Consultant Group on Nursing. Pub. No. 992 (Washington: Government Printing Office, 1963), p. 55.

<sup>2</sup>U. S. Department of Labor, Manpower Administration, Professional and Supporting Personnel, A reprint from the 1967 Manpower Report, (Washington: Government Printing Office, 1967), p. 3.

thousands of nurses by 1975 have been made. According to the Division of Nursing of the Bureau of Health Manpower, 850,000 registered nurses will be needed by 1970 and 1,000,000 by 1975. If the present rates of growth continue, registered nurses will number 699,000 by 1970.<sup>3</sup> In addition, an increase of 27.5 per cent in licensed practical nurses is seen as desirable to give optimum patient care.<sup>4</sup>

To prepare sufficient qualified nurses, organized nursing has stated support of: expansion and improvement in nursing education, increased recruitment of students, and financial assistance for students.<sup>5</sup> Attention has focused upon the educational institutions, especially the community college, for within this institution is the largest growing group of nursing programs; all of the associate degree nursing programs, and approximately one-half of the practical or vocational nursing programs.<sup>6</sup> The associate degree nursing programs have more than tripled between the years 1963 and 1968,<sup>7</sup> and the programs of practical or vocational nursing have increased from 439 schools in 1957 to a total of

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<sup>3</sup>U. S. Department of Health, Education, and Welfare, Public Health Service, Nurse Training Act of 1964, Program Review Report (Washington: Government Printing Office, 1967), p. 13.

<sup>4</sup>American Nurses' Association, Facts About Nursing, A Statistical Summary (New York: American Nurses' Association, 1968), p. 160.

<sup>5</sup>Ibid., p. 10.

<sup>6</sup>Ibid., p. 104.

<sup>7</sup>Ibid., p. 104.

1,149 in 1967. In one year, 1966 to 1967, there was an increase of 68 programs of practical or vocational nursing nationally.<sup>8</sup>

Recommendations have been made that educational institutions increase counseling services and recruitment efforts.<sup>9</sup> In the area of recruitment, one problem confronting the colleges is that of the student selecting the most appropriate nursing program. Educational programs in nursing exist as separate entities rather than as transferable units which would allow students to move easily and expeditiously from one educational level to another. Therefore, it is important for students to make their initial entry into nursing by enrolling in the type of program best suited to their present abilities and future career interests.<sup>10</sup>

The National League for Nursing, recognizes a need for increased enrollment at the highest levels of educational preparation as noted:

A continued increase in nurses prepared for technical functions without a proportionate increase of those with advanced academic and managerial preparation is not desirable. Although a specific optimum technical-professional ratio has not been defined, a good "mix" of nurse manpower to serve society should allow for adequate supervision of technical workers. Current trends are not producing these conditions.<sup>11</sup>

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<sup>8</sup>Ibid., p. 164.

<sup>9</sup>U. S. Public Health Service, op. cit., p. 187.

<sup>10</sup>Laura Corbin Dustan, "Characteristics of Students in Three Types of Nursing Education Programs" (unpublished Doctor's dissertation, University of California, 1963), p. 11.

<sup>11</sup>National League for Nursing, "Educational Preparation for Nursing-1968," Nursing Outlook. Vol. 17:9 (September, 1969), p. 78.

Along with the current trends of far greater numbers of students at the lowest level of preparation, is the mobility desired within the educational structure.<sup>12</sup> Numbers of vocational nurse graduates are seeking admission to associate degree nursing programs. Diploma and associate degree graduates are seeking admission to baccalaureate nursing programs.<sup>13</sup> The question arises as to reasons for students' choice at entry into nursing, and how the students perceive the function of the nursing graduate as differentiated by educational preparation. This suggests an investigation of the reason for student choice and student perceptions of the role of the graduate of the various nursing programs.

According to the 1963 Report of the Surgeon General's Consultant Group on Nursing, it was emphasized:

School and college counselors can play an influential role in guiding students into nursing. Unfortunately, however, many counselors have conceptions of the nurse based on old stereotypes. An understanding of modern nursing and programs of nursing education -- their challenges and satisfactions -- must replace the inadequate information now available to counselors.<sup>14</sup>

Thus it appears of interest and importance to obtain the opinion of the counselor as to the reason for student choice of different programs, as well as the counselor perception of the functioning of the graduate of the various nursing programs.

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<sup>12</sup>Board of Nursing Education and Nurse Registration "Upward Mobility in Nursing," Memorandum to Pre Service Basic Programs in Nursing, (Mimeographed), Sacramento, California, January 9, 1969.

<sup>13</sup>Public Health Service, op. cit., p. 33.

<sup>14</sup>U. S. Public Health Service, op. cit., p. 28.

Statement of the problem. The problem under investigation in this study was to determine whether (1) community college counselors, (2) vocational nursing students, (3) associate degree nursing students, and (4) baccalaureate degree nursing students differ in their perceptions of (a) reasons for student selection of nursing and of different programs, and (b) whether or not the above groups differ in perception of functioning of the program graduates, in the roles of licensed vocational nurse, associate degree registered nurse and baccalaureate degree registered nurse, as related to (c) a model of these positions.

Hypotheses. The following are the hypotheses of this study:

- (1) Students in the three programs will differ in age, educational level of father, family income, and standing in high school graduating class.
- (2) Students in the three programs will differ in their subjective evaluation of the forces having the most influence on the selection of nursing as an occupation, and in the selection of the particular program.
- (3) Students in the three programs and community college counselors for these three programs will not agree in their perception of program characteristics of vocational associate degree, and baccalaureate degree nursing as defined by a nursing model in regard to cost, length of educational time, difficulty of prerequisite subjects, and difficulty of curriculum.
- (4) Students in the three programs and community college counselors for these three programs will not agree in their perception of the functions of the graduates of the vocational, associate degree, and baccalaureate

degree nursing programs as defined by a model, in regard to type of nursing care rendered, principle location of the nursing care given, level of administration by the nurse, eligibility for licensing, route for advancement and title used in referring to this graduate.

Importance of the study. The increased complexity of educational routes to nursing vocations has created perplexing questions related to occupational choice. To assure adequate and appropriately located personnel for the future, careful career choices must be examined now. It is hoped that this study will give valuable assistance to counselors and might suggest a need for nursing to develop more systematic methods of disseminating clear and comprehensive information to those who are working with prospective students of nursing.

Limitations of the study. A possible limitation to this study may be from the lack of a standardized series of entry requirements in the nursing programs of the California Community Colleges. Thus, certain conclusions arising from this study may apply only to populations such as the one used.

The study is further limited by the methods used in gathering data: the questionnaire method and interview method. Although the questionnaire is by far the most widely used method of obtaining data in education, limitations arise due to ambiguity of perception of the information requested.<sup>15</sup> The consensus on the use of the interview method for obtaining

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<sup>15</sup>Walter R. Borg, Educational Research (New York: David McKay Co., Inc., 1967), p. 204.



information is that it can be unreliable and is only as valuable in obtaining information as are the skill and experience of the interviewer.<sup>16</sup> Limitation is involved in the use of one interviewer who was also the researcher in this study.

## II. DEFINITIONS OF TERMS USED

For purposes of this study, the terms in this investigation have been defined to mean the following:

Associate degree program in nursing. A program, approximately two years in length, established as an integral part of a community college, leading to an Associate in Arts degree. The entire program is controlled by the degree-granting institution. The nursing courses comprise approximately one-half the total Associate in Arts degree program. The graduates, known as Associate Degree Nurses (ADN), are eligible for state examinations for licensure as registered nurses.

Baccalaureate degree program in nursing. Refers to a program which is an integral part of a college or university, where the entire program is controlled by the degree-granting institution, where policies and standards for the school of nursing are consistent with those for all other major programs within the degree-granting institution and where the student earns a baccalaureate degree in nursing and is eligible for

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<sup>16</sup>Fred N. Kerlinger, Foundations of Behavioral Research (New York: Holt, Rinehart and Winston, Ind., 1964), p. 476.

state examination for licensure as a registered nurse.

Diploma or hospital program of nursing. Refers to a basic three year program of nursing leading to a diploma, which is under the control of a hospital or other non-collegiate authority. The nursing courses comprise approximately three-fourths of the total diploma program. Graduates are eligible for state examinations for licensure as registered nurses.

Model. A "model" represents the ideal as nearly as can be determined. A model represents a pattern of behavior within which the graduate is expected to conform. For the purposes of this study, reference to a model will be that of the analog model as established in Chapter III.

Perception. Perception is considered as the awareness of objects or relations or qualities, by means of sensory processes and under the influence of set and of prior experiences.

Registered nurse. (R.N.) It is not a degree but a legal title signifying the individual has graduated from a state-approved nursing program and has met all other requirements of the nursing practice act within a state. The graduate nurse has passed a state board examination and been registered and licensed to practice nursing.

Vocational or practical nurse programs. A program leading to a certificate or diploma in vocational nursing which may be organized and operated under public vocational education, either in adult education or community colleges. All courses are nursing courses on a vocational

level. Graduates are eligible for state examinations for licensure as vocational nurses. Graduates are known as Vocational Nurses in the states of California and Texas, and as Practical Nurses in other states. After successful completion of the licensure examination, graduates are known as Licensed Vocational Nurses (LVN), or Licensed Practical Nurses (LPN), according to the state of practice.

### III. ORGANIZATION OF THE DISSERTATION

Chapter I discusses the problem and its importance. It includes a statement of the problem, hypothesis, type of research and the measuring instrument, importance of the study, limitations of the study, definitions of terms, and organization of the dissertation.

Chapter II gives the present programs in educational institutions, an examination of the literature related to recruitment and selection, and perception of the image of the nurse.

Chapter III deals with the procedures used in the study, which include the establishing of a model, description of the sample, and preparation and administration of the questionnaires and the interviews.

Chapter IV presents the data and describes the treatment to which the data were subjected. The relationship of each measure to the hypotheses is given.

A summary of the data, conclusions, and recommendations for further study and research are given in Chapter V.

## CHAPTER II

### REVIEW OF THE LITERATURE

In view of the nature of this study, it seemed pertinent to include in the review of the literature a brief resume of nursing education better to aid in understanding the current status of this profession.

Present programs in educational institutions. To meet its commitment to society, any system of education developed and maintained by a profession has two basic obligations. McGlothlin has described these as "One, to supply enough professional people, and, two, to assure society that they are competent to practice their profession."<sup>1</sup> A third aim was stated in general terms by McConnell when he said, "A democratic, industrialized society needs many types and levels of talent and education."<sup>2</sup> Related to the nursing profession, to meet the total responsibility to society, this statement would indicate that provision must be made for the preparation of individuals having a range of interests and abilities at a variety of educational levels. Nursing has attempted to meet these demands through the establishment of its diverse educational programs.

The first formal training for nurses was that of the hospital diploma program, and today, in addition, three types of programs exist in

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<sup>1</sup>William J. McGlothlin, Patterns of Professional Education (New York: G. P. Putman Sons, 1960), p. 2.

<sup>2</sup>T. R. McConnell, A General Pattern for American Public Higher Education (New York: McGraw-Hill Book Co.), p. 46.

educational institutions. The California League for Nursing has described the programs and has identified the purposes of each of the three types offered in educational institutions in a formal, published statement. In part, it says:

#### The Vocational or Practical Nurse Program

A program leading to a certificate or diploma in vocational nursing may be organized and operated under either adult education or junior colleges. The primary focus of this curriculum is the nursing care of people in inpatient and outpatient services of hospitals. Vocational nurse programs are usually one year in length, and prepare exclusively for vocational nursing, and are neither a part of nor the beginning of a registered nurse program. Program objectives are to prepare a graduate skillful in situations free of scientific complexity, so they are able to assist a physician or registered nurse in complex nursing situations. Successful passing of the State Board examination fulfills the legal requirements to practice as a Licensed Vocational Nurse in California. Licensed Vocational Nurses are not prepared or qualified to function without the direction of either a Registered Nurse or a physician, nor to assume managerial or supervisory functions of a nursing unit.

#### The Associate in Arts Degree Program

The associate in arts degree and diploma programs in nursing are similar to each other. Both programs provide a technical education which is complete for its own purpose and neither program is part of nor equivalent to baccalaureate education. The curriculum focuses on nursing care in in-patient and out-patient hospital services. The general education courses are transferable for baccalaureate credit, but the nursing courses are not. The associate in arts degree program is designed to be completed within two years, generally within a community college. Graduates are prepared to function at the staff nurse level in hospitals, clinics, and physicians' offices. Under the supervision of a head nurse, the graduate is able to give complex nursing care and assist in the direction of Licensed Vocational Nurses and nursing service personnel with lesser training. Successful passing of the State Board examination for licensure fulfills the legal requirements to practice as a Registered Nurse in California. Additional academic preparation and work experience is required to function in positions beyond the staff nurse level. Graduates of the associate degree program may be ineligible for appointment as a Commissioned Officer in the Nurse Corps of the Army, Navy and Air Force.

### The Baccalaureate Degree Program

Programs in nursing leading to the bachelor's degree, combining both general and professional education, are conducted by an educational unit in nursing (department, school or college) which is an integral part of the college or university. The primary focus of the curriculum is the skillful nursing care of people in various hospital and community settings. The length of the program is four years or five years, and it prepares professional nurses who possess a deeper understanding of humanistic and scientific knowledge. This knowledge enables the graduate to function at the staff nurse level in any field of nursing; in a general hospital, psychiatric hospital, in community health agencies, in industrial and occupational health nursing. These graduates have the ability to participate with members of other professions and citizen groups in community health programs and in solving health problems. Successfully passing of the State Board examination fulfills the legal requirement to practice as a Registered Nurse in California. They also qualify for a public health certificate, have the background for advancement to head nurse positions in hospitals without further academic preparation, and have the foundation for graduate study.<sup>3</sup>

Recruitments and selection. In 1966, a survey was conducted by the Western Interstate Commission for Higher Education, of all 287 schools of nursing offering education programs in thirteen Western States, as listed by the National League for Nursing or State boards of nursing. As a part of this survey, a maximum enrollment potential was determined. The responding schools indicated the maximum number of students that could be enrolled with the resources currently available to the nursing programs. These reports indicated that a total of between 20 and 25 per cent more students could have been enrolled in the four basic programs. The diploma and associate degree programs could increase their enrollment by approximately 28 per cent, the practical nursing programs

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<sup>3</sup>California League for Nursing, Nursing Education Programs in California, Committee on Careers in Nursing, 1966 (Pamphlet).

by 20 per cent, and the baccalaureate by roughly 16 per cent.<sup>4</sup>

With insufficient enrollees in its schools to meet society's need for nurses, the profession is concerning itself with how effectively students may be enabled to choose the types of programs best suited to their interests, abilities, and potential. Studies conducted for the Surgeon General's Consultant Group have found that the current number of qualified applicants to schools of nursing is not large enough to assure expanded enrollments. A very intensive recruitment program would thus have to be an important part of any effort to increase the output of schools of nursing.<sup>5</sup> The American Nurses' Association estimates that only approximately 5 per cent of the girls who graduate from the U. S. high schools each year enroll in nursing schools.<sup>6</sup> In general, the rate of recruitment into schools of nursing is lower for the West than for the nation. However, the West is admitting a much higher percentage of its students into programs within colleges and universities than is true of the nation as a whole.<sup>7</sup> For the entire nation, a ratio of 300 to 350 nurses for each 100,000 persons was proposed as a supply level which would make possible gradual improvement in nursing services.<sup>8</sup>

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<sup>4</sup>Today and Tomorrow in Western Nursing (Colorado: Western Interstate Commission for Higher Education, 1966), p. 24.

<sup>5</sup>U. S. Public Health Service, op. cit., p. 55.

<sup>6</sup>Today and Tomorrow in Western Nursing, op. cit., p. 26.

<sup>7</sup>Ibid., p. 27.

<sup>8</sup>Nurses for a Growing Nation (New York: National League for Nursing, 1957), p. 10.

In the area of recruitment, one problem confronting the colleges is that of the student selecting the most appropriate nursing program. The techniques of recruiting students into nursing programs need to be improved according to findings of the National League for Nursing nurse career-pattern study.<sup>9</sup> In discussion of the findings which showed that at the time of their admission to associate degree programs 50 per cent of the students planned eventually to seek a baccalaureate degree, Dineen questioned the probability that all students would reach this goal. However, she wondered how many really knew the differences between the two programs when they made the decision to enter the associate degree program, and had they known and understood these differences, how many might have made another choice initially.<sup>10</sup> A similar concern is expressed in a study by Taylor, Nahm and others involving a review of research studies and practices related to selection and recruitment, in which strong recommendations were made for selective recruitment:

If more applicants can be recruited for nursing schools and especially if differential recruiting can also occur, then the entire selection problem will be facilitated. By differential recruiting it is meant that the kinds of persons being recruited generally possess, to a higher degree than possessed by the population at large, the kinds of characteristics needed to perform successfully in nursing.<sup>11</sup>

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<sup>9</sup>Barbara L. Tate and Lucille Knopf, "Nursing Students—Who Are They?" American Journal of Nursing, 65:9, (September, 1965), p. 102.

<sup>10</sup>Mary A. Dineen, "Current Trends in Collegiate Nursing Education," Nursing Outlook, 17:8, (August, 1969), p. 26.

<sup>11</sup>Calvin W. Taylor and Helen Nahm, et al., "Selection and Recruitment of Nurses and Nursing Students: A Review of Research Studies and Practices" (University of Utah Press, 1966), p. 63.



A survey of the literature indicates that the general subject of the selection of practical nursing students has received little attention. One study and one article focus upon this area.

The Western Interstate Commission for Higher Education, in a 1966 study based upon a mailed questionnaire survey of all nursing education programs in the 13 states in the West secured information from 90.6 per cent of the 287 programs in the region.<sup>12</sup> This report differed from its predecessor of 1959, in that information about practical nurses was included.<sup>13</sup> The following excerpts from this report indicate that the practical nurse might not be entering the best program for wise utilization of individuals:

Wise utilization of human resources is very important to meeting the nursing needs of the people of the West. For this reason, a question was addressed to the schools of practical nursing relative to the number of students who were between 17 and 21 years of age, and the number of that group who were high-school graduates. Out of a total enrollment of 3,623 students, those between 17 and 21 numbered 2,415, or 67 per cent. Those in that age group who were also high school graduates numbered 1,394 or 39 per cent of the total enrollment. These figures indicate that some of the students enrolling in practical nursing programs must have been qualified for enrollment leading to licensure as registered nurses. Since students in the younger age group have many working years ahead of them, it would seem quite important that they be recruited into the type of program that would enable them to make their maximum contribution toward meeting the nursing needs of the West.

. . . The need for additional numbers of registered nurses is critical, and every effort should be made to attract those young

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<sup>12</sup>Today and Tomorrow in Western Nursing, op. cit., p. 25.

<sup>13</sup>(This is noted, for in reviewing the literature it is evident that many reports dealing with nursing and nursing education do not include information about the practical nurse.)

men and women whose abilities and career expectations are commensurate with a career as a registered nurse into programs providing that type of preparation. To the extent that practical nursing programs attract students who should enroll in programs preparing students for licensure as registered nurses, the increased enrollment in practical nursing programs may represent an unwise expenditure of both financial and human resources.<sup>14</sup>

One educator writes of her conviction that the currently existing practical nursing education programs cannot develop fully the nursing potential that many of their students possess. From her experience, the students enrolled into the practical nursing program in one school were the same ability level and interest level students as those being enrolled into associate degree programs. She points out:

If this is true-and I believe it is - it is unfair and almost dishonest to enroll men and women with obvious ability and interest in nursing in a program that prepares them to occupy the lowest rung of the nursing ladder and prohibits their being used to their greatest potential.<sup>15</sup>

This opinion that practical nursing students were often not in the program of their choice was supported with evidence that twenty-five per cent of the students in the September, 1968, class of one associate degree school were graduates from approved schools of practical nursing.<sup>16</sup> Lindstrom, in 1961, at San Jose State College, studied seventy-five retention students and seventy-five withdrawal students in baccalaureate nursing by use of questionnaire and interview technique, to

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<sup>14</sup>Today and Tomorrow in Western Nursing, op. cit., p. 25.

<sup>15</sup>Virginia J. Harris, "This I Believe About Practical Nursing Education," Nursing Outlook, 7:6, (June, 1969), p. 40.

<sup>16</sup>Ibid., p. 41.

determine factors related to student survival. In referring to the entry process, she wrote:

A question of importance is to what extent a lack of correct information concerning the educational program and the purpose of the program is responsible for withdrawal. In spite of the care and detail with which the college and the Nursing Program are explained in the college catalogue and the pamphlets which each applicant receives, in spite of personal interviews and the orientation programs conducted at the opening of the student's college career, some students enter with distorted views of the college and the Nursing Program.<sup>17</sup>

Student characteristics. In attempts to discover distinguishing characteristics of students of the different nursing programs as an aid in assisting students with career choices, some investigations using a variety of methods and instruments have been undertaken. Few studies have been done on the vocational nurse, and fewer including the associate degree nurse than the baccalaureate nurse. The major group at the basic nursing level that has been studied is the diploma school nursing student.

Brooks investigated characteristics of nursing students drawn from nursing education programs in New England. Her population included forty-five students from junior college programs, and 145 students from baccalaureate programs. Information was obtained from incoming freshmen on socio-economic backgrounds and the initial findings revealed that the baccalaureate group was drawn from upper-middle and lower-upper

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<sup>17</sup>Rizpah May Lindstrom, "Student Survival in a Collegiate Basic Nursing Program" (unpublished Doctor's dissertation, Stanford University, 1961), p. 148.

socio-economic backgrounds, while the junior college group was from the lower-middle class in the majority of instances. No significant difference was found in the intellectual ability between the baccalaureate students and those in the two-year associate degree program.<sup>18</sup>

Fox, Diamond, and Walsh, in an investigation of satisfying and stressful situations which students experience as they progress through the basic program in nursing, obtained data from students in three-year diploma programs, in four or five-year degree programs in nursing, and from students enrolled in programs other than nursing in women's colleges. The focus of this research was not on student characteristics but the researchers did obtain data which provided information on students' socio-educational backgrounds, their career decisions, and future plans. Their random sample of schools was drawn from accredited diploma and degree programs in nursing and accredited women's colleges located within 1,000 miles of New York City. The total sample included twenty-three diploma programs, six degree programs, and fifteen women's colleges.<sup>19</sup>

Findings revealed career choice might be influenced by geographic location of the home in relation to nursing programs as most students attended a school close to their homes. The majority of students in the diploma and baccalaureate degree programs were single, relied upon family

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<sup>18</sup>Beatrice R. Brooks, "A Comparison of Student Profiles," Nursing World, 137:18-21, 24-27, 28-30, May, June, July, 1960.

<sup>19</sup>David J. Fox, Lorraine K. Diamond, and Ruth C. Walsh, Satisfying and Stressful Situations in Basic Programs in Nursing Education, Vol. I (New York: Institute of Research and Service in Nursing Education, Teachers College, Columbia University, 1961.).

funds for financial support, and began their educational programs directly after graduation from high school at approximately eighteen years of age. The fathers of the students enrolled in baccalaureate programs were most frequently employed as professionals or proprietors.<sup>20</sup>

As part of the same study, Fox, Diamond, and Jacobowsky reported on career decisions and professional expectations of the same group of students. The median age at which both diploma and degree students decided on a career in nursing was fourteen, and career decisions for non-nursing students had the median age of seventeen. The juniors and senior students in degree programs were more satisfied with the type of school chosen than were the upper-class diploma students. Although some nursing students expressed doubt about career choice, over 80 per cent of the total would study nursing again. About one-half of the students in degree programs reported plans to do general duty nursing for their first employment as a nurse, and less than 10 per cent planned to continue their education in nursing after graduation.<sup>21</sup>

Three studies limited to students in associate degree programs have been reported. Montag, serving as the major investigator of a comprehensive study of seven pilot nursing education programs in community colleges and one program of the same curriculum type under the direction of a hospital, reported on a number of characteristics of students

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<sup>20</sup>Ibid., p. 287.

<sup>21</sup>David J. Fox, Lorraine K. Diamond, and Nadia Jacobowsky, Career Decisions and Professional Expectations of Nursing Students (New York: Bureau of Publications, Teachers College, Columbia University, 1961).

enrolled in these initial programs. Some of the important findings were (1) about 14 per cent came from age groups over twenty-six years of age; (2) males comprised 3 per cent of the group; (3) at the start of their programs, 12 per cent of the students were married and 8 per cent had children; (4) the socio-economic backgrounds of the students conformed to the enrollment pattern of the community college in which the program was offered; and (5) the majority of the students' fathers were engaged in semiprofessional or small business occupations, or were skilled workers.<sup>22</sup>

Anderson reports on a four-state, five year project under the auspices of the W. K. Kellogg Foundation, following the pilot study program by Montag, in which student biographical data were collected. One group of 258 students, enrolled in four associate degree nursing programs 1957 through 1961, and another group of 581 students, enrolled in ten associate degree nursing programs in September, 1963 were studied. In these two groups 27 per cent and 42 per cent were over twenty-one years of age. In both groups the sex ratios were approximately 3 per cent men to 97 per cent women. The socio-economic background of the students' families revealed about 60 per cent were skilled labor, and about 20 per cent were professional and managerial in background. Over half in both groups were married, or had been married. Forty-three per cent of one group had been employed before entering the program, and of these, 56 per cent had worked in fields related to health services.<sup>23</sup>

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<sup>22</sup>Mildred L. Montag, Community College Education for Nursing (New York: McGraw Hill Book Co., 1959).

<sup>23</sup>Bernice E. Anderson, Nursing Education in Community Junior Colleges (Philadelphia: J. B. Lippincott, 1966).

Hiatt reported biographical information on 1,488 students from associate degree programs who had been or were enrolled in California nursing education programs of this type. Of this total group, 60 per cent were between the ages of seventeen and twenty-one and 40 per cent were over twenty-one, 60 per cent were single, and 96 per cent were females. The four main reasons for their choice of an associate degree program were: (1) length of the program, (2) combination of college with a nursing major, (3) program suited financial needs, and (4) the program was located near home.<sup>24</sup>

Dustan conducted a study involving students in the four nursing education programs offered in San Jose, California which focused on the characteristics of the students related to the educational objectives and requirements of the programs in which they were enrolled. The total of participating students was 379, 193 were students in a baccalaureate nursing program, 54 were associate degree nursing students, and 132 students were in two diploma programs. Findings were that the students enrolled in the associate degree program most nearly met the expectations which the investigator had anticipated would characterize the student group in the baccalaureate program. Fifty-eight per cent of the associate degree students were over twenty-five, had selected the associate degree program because it was inexpensive, took only two years to complete, and

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<sup>24</sup>California State Department of Education, California Associate in Arts Nursing Project, Part II, Third Annual Report to the W. K. Kellogg Foundation 1960-1962 (Sacramento, California Department of Education.).

allowed them to live at home and maintain family responsibilities while attending school. Of the four groups, the associate degree group received the highest scores on tests of academic aptitude.<sup>25</sup>

Their immediate post-graduation plans were in agreement with their program objectives, however their long range career plans included positions for which preparation at the baccalaureate level is the minimum educational prerequisite: positions in public health nursing, in various levels of nursing service administration, and in teaching in schools of nursing. Over half of them indicated that they planned to seek baccalaureate preparation in the near future, and a fourth of them were already planning to undertake graduate study. On the basis of scholastic aptitude, values, interest, and long-range career plans, this student body was judged to be inappropriately matched with the objectives and curriculum requirements of the nursing education program which they had selected.<sup>26</sup>

This study showed the students who selected the baccalaureate degree program had chosen to enroll in this program because it offered the best preparation for what they wanted to do, provided an opportunity for a general education in addition to a major in nursing, and allowed them to earn a college degree. A slightly higher percentage of these students' fathers had been to college than was true of students in the other programs. As a group they were younger, and their career goals

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<sup>25</sup>Dustan, op. cit., p. 192.

<sup>26</sup>Dustan, Ibid., p. 193.



reflected the type of educational preparation offered by the nursing education program they had selected.<sup>27</sup> In general these studies showed the vocational nursing student was often not in the program of her choice. The associate degree nursing student was seen to be inappropriately matched with the curriculum objectives according to her future plans. This student was older, has worked prior to entrance into the program, came from a socio-economic level conforming to the community surrounding the college, and had chosen this program because it was inexpensive, took only two years, and was near home. Differences in ability between the associate degree nursing student and the baccalaureate degree student were not apparent. The baccalaureate degree student was younger, entered directly after high school, came from a higher socio-economic level, and expected to begin her employment with a staff nurse position.

Perception of the nurse image. As some students are in programs not in keeping with their ultimate goals, the question arises as to the accuracy of their perception of the function of the graduate of these programs. The image projected by the workers in a field, affects recruitment into that field. Kelly, with reference to the nursing profession suggests that,

Far too many young people and those who guide them retain the limited, stereotyped image of the nurse as seen on the television screen or as portrayed in the paperback romances. Conveying a more accurate picture of the nurse is a problem that the profession has not yet solved.<sup>28</sup>

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<sup>27</sup>Ibid., p. 195.

<sup>28</sup>Cornelia W. Kelly, Dimensions of Professional Nursing (New York: MacMillan Co., 1968), p. 72.

Bridgman concurs, as she states that:

The public conceptions of nurses' training as a narrowly applied type of education, involving hard physical work and a preponderance of routine, with little intellectual content or stimulating teaching, have caused many parents and high school advisers to think that nursing is not a suitable occupation for bright students unless they can afford nothing better.<sup>29</sup>

Bixler and Bixler observed:

The public concept of nursing, which is generally shared by high school counselors, is acquired largely from heresay that harks back to undesirable conditions of the past.<sup>30</sup>

Two additional studies assess the image of nursing students held by high school counselors and one study determines knowledge about nursing education held by counselors.

To assess the conceptual image of high school counselors, Klemer, in 1962, asked a random selection of 140 counselors employed in the secondary schools of Alabama, to check an adjective check list she had devised. This forced-choice check list was compared with the results given by eleven nurse educators. Eighty-six of the counselors returned the check lists as directed, and the results showed seventy-four of the eighty-six counselors thought the typical Alabama nursing student tended to be "scholastically above average" rather than "scholastically below average." Eight of the nurse educators thought this to be true. There were other differences, however, in statistical analysis, only three of the

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<sup>29</sup>Margaret Bridgman, Collegiate Education for Nursing (New York: Russell Sage Foundation, 1953), p. 73.

<sup>30</sup>R. W. Bixler and Genevieve Bixler, Administration for Nursing Education in a Period of Transition (New York: G. P. Putnam Sons, 1954), p. 195.

differences between the counselors' and the nurse educators' selections were shown to have significance at the .05 level of confidence. These were the counselors' selection of "realistic" where the nurse educators chose "idealistic"; the counselors selection of "dedicated" where the nurse educators selected "motivated"; and the much greater majority by which the counselors selected "physically adequate" over "physically robust" even though the nurse educators also showed a small majority for the same choice. The speculation that high school guidance counselors, as a group, would have a completely distorted image of the typical nursing student was not borne out by the sample used in this study.<sup>31</sup>

However, a study by Orzach, in which questionnaires were distributed to a total of 714 girls in selected Wisconsin high schools, showed that counselors may have a poor image of the nursing student. In trying to determine what influenced young women in their preferences toward or away from nursing, specific relationships between the favorability of each source was determined. Findings were:

Students consider that their high school teachers, guidance counselors, and principals are less favorably disposed to nursing than any other sources, except for newspaper comic strips.<sup>32</sup>

Cly, in 1966, chose for her study a random selection of one hundred counselors in North Carolina, the fifty-five returned questionnaires were used for analysis. Cly's study showed a lack of information by high

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<sup>31</sup>Margaret G. Klemer, "The Counselor's Image of the Nursing Student," Nursing Outlook, 12:10, October, 1964, p. 54.

<sup>32</sup>L. H. Orzach, "Occupational Impressions, Occupational Preferences, and Residence," Personnel Guidance Journal, 38:5, January, 1960, p. 358.

school counselors regarding which programs qualified students to take state board of nursing examinations, a lack of information about the curriculum of diploma schools, and a major finding was that the full-time counselors received higher scores on knowledge than did the part-time counselors about their knowledge of nursing, and nursing trends.<sup>33</sup>

### III. SUMMARY

This chapter begins with a discussion of the present programs of preparation in educational institutions for vocational, associate degree and baccalaureate degree nurses. A dearth of studies exist related to counselor or student perception of reasons for student career choice of specific programs. Related studies on student characteristics, abilities, career choices and plans congruent with work goals were cited and their outcomes discussed. These tended to reveal inappropriate choice of program by students as related to their career objectives. Studies on high attrition rates have raised the question of how knowledgeable the student was prior to entry into the program, about program objectives and functioning of the graduate. One study showed that, in some aspects, the high school counselor image of nurses was not different from that of those in nursing education, whereas two other studies showed the high school counselor may have a poor image of the nursing student and lack information about nursing education. Studies were not available related to the college counselor and perception of the nursing image.

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<sup>33</sup>Jean F. Cly, "What School Counselors Know About Nursing," Tar Heel Nurse, Vol. 30:4, December, 1968, pp. 62-67.

## CHAPTER III

### METHODS OF THE STUDY

#### I. SOURCES OF THE DATA

##### The Locale of the Study

California is one of the most urbanized states in the nation, and 60 per cent of the population of the state as of mid-1968 was located in the ten southernmost counties, referred to as Southern California.<sup>1</sup> In order to obtain a more characteristic sampling including both urban and rural areas, the study was limited to Northern California, that area above the northern borders of San Luis Obispo, Kern and San Bernardino Counties.

Within this region, the study was conducted with subjects in three randomly selected community colleges and two universities: Modesto Junior College, Sacramento City College, San Joaquin Delta College, Stanford University, and University of California, San Francisco.

Modesto Junior College is one of the oldest junior colleges in the State, organized in 1921, and located in Modesto, California. Boundaries of the area served by the college include nearly 4,000 square miles, being known as the Yosemite Junior College District. Enrollment for day students is currently 4,600.<sup>2</sup> Modesto, population 46,400,<sup>3</sup> the

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<sup>1</sup>California, California Statistical Abstract, 10th Ed., (1969), p. ix.

<sup>2</sup>Modesto Junior College, Registrar's Office, personal interview, February 6, 1970.

<sup>3</sup>California, California Statistical Abstract, op. cit., p. 16.

county seat and largest city in Stanislaus County, is located near the northern tip of the San Joaquin Valley. The major area served by this district is predominantly rural and agricultural in nature.<sup>4</sup>

San Joaquin Delta College, located in the city of Stockton, was first established in 1935, and presently serves the district known as San Joaquin Delta College District. Current enrollment for day classes is 5,799.<sup>5</sup> The city of Stockton, population 97,680,<sup>6</sup> is located on an inland port, and in addition to industrial plants, the country has diversified vegetable crops on small and large farms, vineyards and orchard areas.<sup>7</sup>

The community college serving the most urban of these two-year college areas, Sacramento City College, was founded in 1916, and is seventh oldest public community college in California. The area from which the enrollment is obtained is the Los Rios College District. The district is also served by the American River College. Sacramento City College enrollment for full time day students for the spring semester, 1970, is 8,028.<sup>8</sup> The city of Sacramento, with a population of 257,822<sup>9</sup>

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<sup>4</sup>"Modesto Memo" compiled by the Research Department, Greater Modesto Chamber of Commerce, 1970, (pamphlet).

<sup>5</sup>San Joaquin Delta College, Registrar's Office, personal interview, February 13, 1970.

<sup>6</sup>California Statistical Abstract, op. cit., p. 15.

<sup>7</sup>"The Stockton, California Story" compiled by the Research Department, Greater Stockton Chamber of Commerce, not dated, (pamphlet).

<sup>8</sup>Sacramento City College, Registrar's Office, personal interview, February 13, 1970.

<sup>9</sup>California Statistical Abstract, op. cit., p. 15.

is considered to be a rapidly growing urban area.<sup>10</sup>

The two universities are both located in urban areas. The University of California, San Francisco, is located in the center of a metropolitan city.<sup>11</sup> Stanford University is a fairly large private institution with a national reputation, located on a large acreage, and surrounded by metropolitan communities.

### The Sample Population Under Study

The population under study included four groups; community college counselors, vocational nursing students, associate degree nursing students, and baccalaureate degree nursing students. It was desirable to select three of these groups from a representative community college population. The population was stratified first to include all accredited community colleges in Northern California offering both vocational nursing and associate degree nursing programs with class sizes between twenty and thirty students. From this group were selected those community colleges operating on the semester system rather than the quarter system. Those with semester systems were chosen to obtain the sample as near to graduation as possible, as this student would more firmly have affixed the image of the graduates of various nursing programs. These community colleges were then grouped into three population groupings resulting in two urban, two semi-urban, and two rural colleges. Following stratification on these

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<sup>10</sup>"Standard Industrial Survey Report," prepared by the Sacramento Metropolitan Chamber of Commerce, 1970.

<sup>11</sup>California Statistical Abstract, op. cit., pp. 15-16.

factors, and using a table of random numbers, one college was selected from each of the three groupings. In the selected community colleges the length of time the students had attended the colleges differed. Whereas in San Joaquin Delta College and Sacramento City College, a few students may have taken preliminary courses prior to entering the nursing programs, in Modesto Junior College it seemed to be more the rule that students enter after one or two years of preliminary work.

Similarly, two schools were selected from a total of seven state colleges and universities in Northern California. This fourth group consisted of first year nursing students at Stanford University, and first year nursing students at the University of California, San Francisco. Both nursing programs are five academic years in length, and the first two years of the program may be taken at that University, or at other accredited universities or colleges. The last three years must be spent on the particular campus from which the student is graduating. This nursing student group was in the first year of the nursing program, but in the third academic year of college or university work.

## MEASURES EMPLOYED IN COLLECTING, ORGANIZING AND ANALYZING THE DATA

### I. FORMULATION OF A MODEL

More easily to handle the complexity of the educational system, and graduate roles of the three types of nurses under study, the analog<sup>12</sup>

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<sup>12</sup>Joseph E. Hill and August Kerber, Models, Methods, and Analytical Procedures in Education Research (Detroit: Wayne State University Press, 1967), p. 17.



model was chosen. In this model certain structures were presented to represent the original entity under consideration.

Statements of functions of the vocational nurse, associate degree nurse, and baccalaureate degree nurse, were obtained from the American Nurses Association,<sup>13</sup> California League for Nursing,<sup>14</sup> and Western Interstate Commission for Higher Education.<sup>15</sup> In addition, California laws related to nursing education, licensure and practice, and the vocational nursing practice act were obtained.<sup>16</sup> These statements were analyzed, and formed into the analog model describing the educational route and on-the-job functioning of the graduates of the vocational nursing, associate degree nursing, and baccalaureate degree nursing programs. This model is graphically presented on the following pages.

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<sup>13</sup>American Nurses' Association, Statement of Functions of the Licensed Practical Nurse, New York: American Nurses' Association, 1964, (pamphlet); American Nurses' Association "First Position on Education for Nursing," American Journal of Nursing, Vol. 65:12 (December, 1965).

<sup>14</sup>California League for Nursing, "Nursing Education Programs in California," San Francisco: CNA (pamphlet).

<sup>15</sup>Essential Content in Baccalaureate Programs in Nursing, (Colorado: Western Interstate Commission for Higher Education, 1967).

<sup>16</sup>Board of Vocational Nurse and Psychiatric Technician Examiners, Rules and Regulations-Vocational Nurses, California: State of California Department of Professional and Vocational Standards, 1969, pp. 184-192; Ibid., Vocational Nursing Practice Act, California: State of California Department of Professional and Vocational Standards, 1969, pp. 4-21; Board of Nursing Education and Nurse Registration, Laws Relating to Nursing Education - Licensure - Practice with Rules and Regulations, California: State of California Department of Professional and Vocational Standards, 1968, pp. 4-51.

Figure 1 is a schematic representation of the titles held following successful completion of the State Board of Nursing examinations. The vocational nurse is qualified to become a Licensed Vocational Nurse, while the associate degree and the baccalaureate degree nurse are qualified for licensure as a Registered Nurse. In the State of California, the baccalaureate degree nurse is eligible for certification as Public Health Nurse, and in this capacity can function as a school nurse.

The area of service and advancement routes is illustrated in Figure 2, in which it will be noted that the baccalaureate degree nurse is the only nurse with the foundation for graduate study, and is the only one functioning in diverse health areas. The advancement routes are considered closed to both associate degree and vocational nurse without further preparation.

The level of functioning of all nurses, as shown in Figure 3 is under a licensed physician. The flow of authority is seen to originate with the physician and terminate in the vocational nurse, when considered only in relation to the four roles indicated. The baccalaureate degree nurse is considered equally prepared to plan health care with related health workers such as social workers, dietitians, physican therapists, and others. The associate degree nurse can guide, direct, and teach and render complex care. The role of the vocational nurse is limited in independent action.

In Figure 4 the difference in the educational preparation, and investment of cost and time related to each program are shown. The

BACCALAUREATE  
DEGREE  
NURSE

REGISTERED NURSE  
PROFESSIONAL NURSE  
PUBLIC HEALTH NURSE  
SCHOOL NURSE

ASSOCIATE  
DEGREE  
NURSE

REGISTERED NURSE  
TECHNICAL NURSE

VOCATIONAL  
NURSE

LICENSED  
VOCATIONAL  
NURSE

FIGURE 1

TITLES USED IN REFERRING TO THE BACCALAUREATE DEGREE NURSE, ASSOCIATE DEGREE NURSE, AND VOCATIONAL NURSE FOLLOWING SUCCESSFUL COMPLETION OF STATE LICENSING EXAMINATIONS.

BACCALAUREATE  
DEGREE  
NURSE

HOSPITAL

COMMUNITY

HAS FOUNDATION FOR

STAFF NURSE

PUBLIC HEALTH NURSE  
CLINICS AGENCIES

GRADUATE STUDY  
TEACHING  
RESEARCH  
ADMINISTRATION

HEAD NURSE

SCHOOL NURSE

OFFICE NURSE

SUPERVISORY NURSE

ASSOCIATE  
DEGREE  
NURSE

HOSPITAL

COMMUNITY

STAFF NURSE

NO ADVANCEMENT  
WITHOUT FURTHER  
PREPARATION

VOCATIONAL  
NURSE

HOSPITAL

NO ADVANCEMENT  
WITHOUT FURTHER  
PREPARATION

INSERVICE OUTPATIENT  
DEPT. DEPT.

FIGURE 2

AREAS IN WHICH THE BACCALAUREATE DEGREE NURSE, ASSOCIATE DEGREE NURSE, AND VOCATIONAL NURSE HAVE BEEN ACADEMICALLY PREPARED TO SERVE WITH UPWARD MOBILITY ROUTES INDICATED

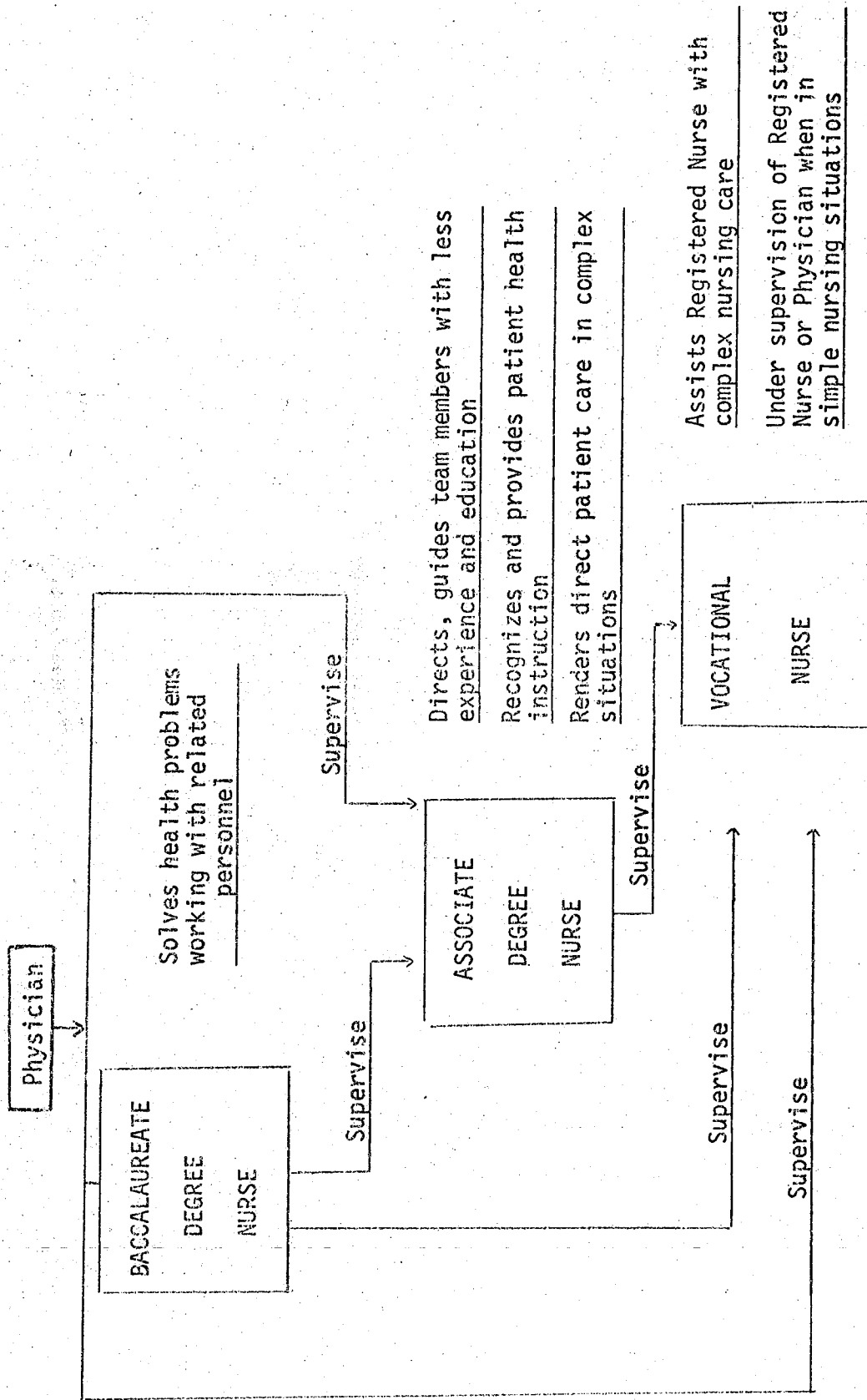


FIGURE 3

PATTERN OF SUPERVISION FOR THE BACCALAUREATE DEGREE NURSE, ASSOCIATE DEGREE NURSE, AND VOCATIONAL NURSE, AND LEVEL OF FUNCTIONING AS A GRADUATE NURSE

BACCALAUREATE  
DEGREE  
NURSE

LOCATION - UNIVERSITY  
STATE COLLEGE  
COST - 1,500 TO 4,500 ANNUALLY  
TIME - 4 TO 5 YEARS  
CURRICULUM - LIBERAL ARTS BASE

ROUTE UPWARD-FOUNDATION FOR GRADUATE STUDY

ASSOCIATE  
DEGREE  
NURSE

LOCATION - JUNIOR OR COMMUNITY COLLEGE  
COST - 250 TO 350. ENTIRE PROGRAM  
TIME - 2 YEARS  
CURRICULUM - 1/2 GENERAL EDUCATION COURSES, 1/2 NURSING COURSES

ROUTE UPWARD - TERMINAL EDUCATIONAL PROGRAM

LOCATION - COMMUNITY COLLEGE AND ADULT EDUCATION  
COST - 100 TO 150 TOTAL  
TIME - 12 TO 18 MONTHS  
CURRICULUM - ALL NURSING COURSES  
ROUTE UPWARD - TERMINAL EDUCATIONAL PROGRAM  
NOT PART OF REGISTERED NURSE  
PROGRAM

VOCATIONAL  
NURSE

FIGURE 4

SOME DIFFERENTIATING CHARACTERISTICS OF THE EDUCATIONAL PROGRAMS TO PREPARE THE  
BACCALAUREATE DEGREE NURSE, THE ASSOCIATE DEGREE NURSE, AND  
THE VOCATIONAL NURSE

ultimate purpose is shown, revealing the vocational and associate degree nurses to be in terminal programs; considered complete for their purposes. The baccalaureate degree program is observed to be the only one leading to a graduate program for the Master of Science degree and the Doctor of Nursing Science Degree.

## II. INSTRUMENTS

Four instruments were constructed for appraisal of the problem: a student questionnaire, counselor questionnaire, comparing vocations questionnaire and a personal interview schedule.

### QUESTIONNAIRES

#### Student Questionnaire

A questionnaire was developed to secure data on the student's background, reasons for occupational choice, reasons for program selection, and career expectation.<sup>17</sup> Several of the questions utilized were adapted from that of Dustan<sup>18</sup> in her study of characteristics of students in three types of nursing education program.

Prior to development of the content and form of the questions relating directly to career choice, personal interviews were held with ten counselors at which time they were asked to indicate their belief as to

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<sup>17</sup>Appendix E, p. 158.

<sup>18</sup>Laura Corbin Dustan, "Characteristics of Students in Three Types of Nursing Education Programs" (unpublished Doctor's dissertation, University of California, 1963).

reason for student choice of the three nursing education programs being studied. As a result of these interviews, certain items deemed to be important were added. This intermediate form of the questionnaire was pretested through the cooperation of selected students in two nursing education programs in Stockton, but of a different group than those being used in the study. Based on the information and experience gained from the pretesting the final form of the questionnaire was developed to facilitate ease in student use and efficiency in subsequent tabulation of the data.<sup>19</sup>

#### Counselor Questionnaire

This instrument asks the judgement of the counselor as to influential factors in student choice and the degree of importance of factors related to student choice for three nursing programs. The items on this instrument were taken from the student's questionnaires.<sup>20</sup>

#### Comparing Vocations Questionnaire

This instrument consisted of thirty items pertaining to the vocational nurse, associate degree nurse, and baccalaureate degree nurse, and was based on the previously established analog model. In addition, five items (#1, 3, 8, 10, 14) were included to determine the favorableness of the perception of the three nursing programs. Following completion of the questionnaire, this instrument was submitted to five nursing experts in the field to establish face validity. All thirty objective

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<sup>19</sup>Appendix E. p. 158.

<sup>20</sup>Appendix D. p. 155.



items were rated by these experts as being consistent with the functions and educational basis of these nursing vocations as established by the American Nursing Association.<sup>21</sup> This instrument was administered to all participating students and counselors.

### INTERVIEWS

The interview technique was chosen because it permits supplementary exploration of specific questions in depth. It was also used as an external criterion to aid in evaluating questionnaire validity. Guidelines advised by Rummel<sup>22</sup> were used with particular attention to structure and preliminary tryout. The interview technique was developed and several trial interviews were carried out with counselors and students who were not a part of the study. After refinement of technique, the interviewer appeared to have developed a workable approach which seemed to yield the information sought. A copy of the final form of the interview schedule is in Appendix H.<sup>23</sup>

#### IV. ADMINISTRATION OF THE INSTRUMENTS

The cooperation and participation of the nursing school administrators were secured during 1969. During the initial interviews, the purposes and plans of the research were explained to

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<sup>21</sup>Appendix F. p. 165.

<sup>22</sup>J. Francis Rummel, An Introduction to Research Procedures in Education (New York: Harper & Brothers, 1958), pp. 66-67.

<sup>23</sup>Appendix H. p. 171.

give the administrators of the programs sufficient time to consult with their faculties and students prior to the testing period, which was planned for the early spring of 1970. The administrators, faculties, and students exhibited much interest in the undertaking, which greatly facilitated the subsequent data collection.

The research plan was designed to include all students enrolled in the latter part of their final year in vocational nursing and associate degree nursing programs in the three community colleges, and students enrolled in the third year of college, but the first year of the basic nursing education programs at the two universities. At each of the community colleges, one or two class periods were given the investigator for the purposes of explaining and administering of the questionnaires. An explanation of the purposes of the study and the need for their participation was given. Questionnaires were administered by the same examiner to all students as a group. Two students who were absent from class were given the questionnaire individually by the same examiner on a separate date. All responses were entered by subjects on mark sensed cards.

The investigator and the administrator of the department of nursing at Stanford University collaborated in preparing a letter explaining the project. This letter and the questionnaires for all of the student groups were forwarded to the administrator, who enlisted the participation of the students. From this first contact, approximately 78 per cent of this group responded. A second letter after ten days, to the administrator of nursing resulted in participation by approximately

82 per cent of the group.

With reference to the mail questionnaire, according to Kerlinger,<sup>24</sup> "Returns of less than 40 or 50 per cent are common. Higher percentages are rare. At best, the researcher must content himself with returns as low as 50 or 60 per cent."

A list of the first year basic nursing students with their addresses was furnished to the investigator and the group of students at the University of California, San Francisco, were contacted. The questionnaire, with its covering letter and stamped, return envelope, was sent by first class mail to the seventy-seven first year basic nursing students. An almost immediate response of 50 per cent was received. After ten days a second letter was forwarded to the individual students. Response from this second letter resulted in fourteen additional questionnaires. Approximately 66 per cent of this total group participated.

Total sample included 302 women and five men. One of the five men was enrolled at the University of California, San Francisco, three were enrolled in the Associate Degree Program in Sacramento, and one of the men was enrolled in the San Joaquin Delta College group. These five men composed 1.6 per cent of the total student group. Since the number and percentage of males was so small a part of the sample, no male and female breakdowns were included in data analysis. Table I reveals the number of students in each program in each of the schools of nursing from whom data

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<sup>24</sup>Fred N. Kerlinger, Foundations of Behavioral Research (New York: Holt, Rinehart, and Winston, Inc., 1964), p. 397.

were collected.

TABLE I  
NUMBER OF STUDENTS IN EACH PROGRAM IN EACH OF THE SCHOOLS  
OF NURSING FROM WHOM DATA WERE COLLECTED

PROGRAM	MODESTO	SACRAMENTO	SAN JOAQUIN	STANFORD	UCSF
Vocational	40	35	24	-	-
Associate	39	48	45	-	-
Baccalaureate	-	-	-	25	51
	—	—	—	—	—
Total	79	83	69	25	51

Total of all participating students = 307

During 1969, the heads of the counseling departments at Modesto Junior College, Sacramento City College, and San Joaquin Delta College were contacted to establish a schedule for testing. A regularly scheduled counseling staff meeting was offered at the beginning of the 1970 Spring semester during which the counseling staff could be given an explanation as to the nature and objectives of the present study. All completed questionnaires as given to them by the examiner, indicating responses on mark sensed cards. One respondent's questionnaires were not used, for instead of marking the answers, he indicated he did not know the differences between the three nursing programs and could not answer

the questions. Table II reveals the number of counselors and location in each school, from whom the data were collected and analyzed.

TABLE II  
NUMBER OF COUNSELORS IN EACH COLLEGE FROM WHOM  
DATA WERE COLLECTED

COUNSELORS	MODESTO	SACRAMENTO	SAN JOAQUIN
Male	6	11	13
Female	2	3	3
Total	8	14	16

Total participating counselors = 38

The final sample of 307 students included all second year associate degree nursing students enrolled at Modesto Junior College (N=39), at Sacramento City College (N=48), and at San Joaquin Delta College (N=45). The final sample of students included all second year vocational nursing students enrolled at Modesto Junior College (N=40), at Sacramento City College (N=35), and at San Joaquin Delta College (N=24). At Stanford University Department of Nursing the sample included all but three of the freshman nursing students, (N=25). At the University of California, San Francisco, fifty-one of the seventy-seven freshman nursing students were included. This gave a total of seventy-six students who participated from the baccalaureate programs.

The final sample of counselors totaled thirty-eight for the three colleges, including Modesto City College (N=8), Sacramento City College (N=14), and San Joaquin Delta College (N=16). There were thirty male counselors, and eight female. All of the counselors were full-time with the exception of five. A counselor sample was not chosen from the two universities because of the difference in the counseling practices as compared to the community colleges. Admission applications, recruitment, and student counseling for nursing students is generally confined to the nursing departments.

In addition to the questionnaire, a subsample of the community college subjects, chosen randomly, were interviewed by this investigator in order to obtain more detailed information concerning the process involved in vocational choice. A personal interview involves a direct face-to-face conversation between the interviewer and the person from whom the information is being sought. The chief advantage, particularly when the open-end response is used, is that more information is generally obtained than with other techniques of securing information. It offers the opportunity of providing a more adequate picture of what the respondent has in mind, what is important to him in respect to the topic under discussion, how intensely he feels about it, what the question means to him, and within what frame of reference he is answering.<sup>25</sup>

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<sup>25</sup>M. Jahoda, M. Deutch and S. W. Cook, Research Methods in Social Relations (New York: The Dryden Press, 1951), II. p. 427.

A description of the interview procedure is given to illustrate the methods used. Every effort was made to establish a situation where reliable and valid responses would be forthcoming. Preliminary interview schedules were designed and tested. As a result, changes were made in wording of some questions. After the preliminary interview schedules were revised, the interviewer traveled to the colleges to conduct the interviews. One purpose served by the questionnaires in this instance had been to get the respondent's mind on the subject area.

Those chosen to be interviewed were the heads of the nursing programs at the three community colleges, a sampling of counselors and students at each community college, selected at random. Using a table of random numbers, five subjects were selected from a listing of the community college counselors at the three colleges, totaling fifteen counselors; five subjects were selected from each of the three vocational nursing programs, totaling fifteen subjects, and five subjects were selected from each community college associate degree program, totaling fifteen subjects.

In all the interviews, a structured, open-end interview schedule was employed, and each interview was conducted by this investigator. An introductory explanation as to the objectives of the study, and the value of the subject's participation was made. Every effort was made to assure the respondent that all conversation and responses would be held in the strictest confidence and that her name would not be included in any of the study.

The interview was structured, and each person was asked the same

questions in the same way. Respondents were encouraged to comment on certain points not included in the regular interview instrument.

Conducting the interview took from approximately one-half hour to one and one-half hours depending on how much time the respondents had available. The average time was about forty-five minutes.

In order to facilitate the interview, each respondent was given a copy of the interview inventory to follow. A summary of replies were recorded on a similar copy during the interview, by the interviewer. Of those interviewed, all respondents appeared very eager to participate and most expressed gratitude at being given an opportunity to express beliefs and feelings. Several respondents requested reassurance of the confidentiality of the material and the danger to their position within the school structure if this information was revealed in a way identifiable as coming from them. However, there was a desire to participate, expressed quite strongly, with the hope the research might have implications leading to possible change. In conducting the interview, a request was made for the respondent's opinion, i.e., "What do you think?," or "In your judgement . . ." Questions were open-ended, yet each respondent appeared to give responses that fell into three main categories.

Additional information concerning recruitment and selection policies was secured from the administrators of the vocational nursing and associate degree nursing community college programs, and a university program. These interviews involved an average time of two hours.



## V. STATISTICAL MEASURES

Each of the sixty items on the student questionnaire was compared by means of the chi square test of homogeneity for independent groups. Each of the thirty-five items on the counselor questionnaire was analyzed with a chi square statistical test.

The thirty-five items on the Comparing Vocations Questionnaire were compared in the following manner: (1) the five subjective questions were analyzed using the Kruskal-Wallis H-test, following preliminary treatment by the Friedman Rank Test, to distinguish differences between groups, and (2) the answers on the remaining thirty items were scored on distance from the role model, summed, and a Kruskal-Wallis H test and post hoc comparisons was performed to distinguish differences between groups.<sup>26</sup> The information from the thirty students' and fifteen counselors' interviews was analyzed and classified into categories into which the data tended to cluster. The frequency of response within each category was calculated. These were used to describe the entire interview schedule.

## VI. SUMMARY

Chapter III has discussed the design of the study and presented the procedures used. The measures employed in collecting, organizing and analyzing the data have been discussed. Chapter IV will discuss the analysis and findings of the collected data.

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<sup>26</sup>Joseph E. Hill and August Kerber, Methods and Analytical Procedures in Education Research (Detroit: Wayne State University Press, 1967), p. 328.

## CHAPTER IV

### PRESENTATION OF FINDINGS

In this chapter, the findings and interpretations for each of the hypotheses are presented. Selection of statistical techniques is discussed, followed by a restatement of the specific hypotheses to be investigated. Then the statistical procedures used and analysis of the findings for each hypothesis is discussed.

#### I. SELECTION OF STATISTICAL TECHNIQUES

Nonparametric techniques were chosen as appropriate and applicable to this study because the variables measured were derived predominantly from nominal and ordinal scales.<sup>1</sup> Chi square was used for categorical comparisons.<sup>2</sup>

The Kruskal-Wallis one-way analysis of variance by ranks was used in treatment of the data having ordinal measurement.<sup>3</sup> The probability arbitrarily selected as the minimally acceptable level of significance for all statistical computations in this study was that of .05.

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<sup>1</sup>Sidney Siegel, Nonparametric Statistics for the Behavioral Sciences (New York: McGraw-Hill Book Co., 1956), p. 22.

<sup>2</sup>Ibid., p. 175.

<sup>3</sup>Ibid., p. 184.

## II. DESCRIPTION OF FINDINGS

Hypothesis I: Students in the three programs will differ in age, educational level of father, family income, and standing in high school graduating class.

It was pointed out in Chapter II that a number of investigations have focused on students in diploma and baccalaureate programs, but fewer have dealt with the associate degree and vocational nurse. For the purpose of this investigation, background information was obtained for the students in the three nursing programs which comprised the sample.

The first part of the student questionnaire was designed to collect the data to test the first hypothesis. The majority of the students responded to all questions, but for those questions on which there were incomplete responses, the number to whom the data applied are reported in the tables which accompany the descriptive statements. The data pertaining to the first hypothesis are presented first, followed by other descriptive information.

### Age

The majority of the students in the study were under twenty-nine years of age (65 per cent). However, 35 per cent ranged in age from thirty to over fifty years, as shown by Table III. The baccalaureate degree nursing program attracted most of the students who were in the younger age groups, 98 per cent at age twenty-nine or younger; and the vocational nursing program attracted more students in the older age group, only 52 per cent at age twenty-nine or younger.

The data in Table III were tested by the chi square method for

independence. The distributions of the three programs were significantly different at the .001 level. This showed that a relationship existed between the type of nursing education program which the students selected and their age group.

Hiatt reported that about 40 per cent of the students in the associate degree programs which she studied were over twenty-one years of age.<sup>4</sup> Dustan reported that 58 per cent of the associate degree program students which she studied were over twenty-nine years of age, and the baccalaureate group studied had 92 per cent under twenty-five years of age.<sup>5</sup> The groups of this study appeared to be in age groups similar to findings of the studies by Dustan, and to be of an older age group than the group studied by Hiatt.

#### Educational Level of Father

The students in the study composite came from homes in which the educational level of the father ranged from eighth grade or less (31 per cent) to those having finished college (19 per cent). The data on the educational level attained by the fathers of the students in the composite student group and in each of the three programs are presented in Table IV. Table IV shows that 51 per cent of the students' fathers in the baccalaureate degree programs had finished college, 12 per cent of the

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<sup>4</sup>California State Department of Education, California Associate in Arts Nursing Project, Part II, Third Annual Report to the W. K. Kellogg Foundation 1960-1962 (Sacramento, California), p. 11.

<sup>5</sup>Dustan, op. cit., p.78.

TABLE III

AGE RANGE OF STUDENTS IN THE STUDENT COMPOSITE  
AND THE THREE NURSING PROGRAMS

Age Range	Student Composite		Vocational Nursing Program		Associate Degree Nursing Program		Baccalaureate Degree Nursing Program	
	No.	%	No.	%	No.	%	No.	%
29 or under	201	65	52	52	74	56	75	98
39 or under	47	15	18	18	28	21	1	1
49 or under	51	16	24	24	27	20	0	0
50 and above	8	2	5	5	3	2	0	0
Total	307	98	99	99	132	99	76	99

$\chi^2 = 51.958$        $df = 6$        $P < .001$

students' fathers in the associate degree program, and 6 per cent of the students' fathers in the vocational nursing program had finished college. Only 10 per cent of the fathers of the baccalaureate degree program had less than eighth grade education, while 47 per cent of the vocational nursing students had fathers with less than an eighth grade education. None of the fathers of the baccalaureate degree nursing students had finished a technical school education.

The data in Table IV were tested by the chi square method for independence. There was a statistically significant difference at the .001 level among the three programs on the distributions of the fathers' educational attainment. This indicated that a relationship existed between the educational level attained by the fathers and the school selected by the students. The baccalaureate degree students had fathers who had achieved the highest educational level, the fathers of the associate degree nursing students was next high, while the vocational nursing students had more fathers whose education was limited to grade school.

#### Family Income

The students had some difficulty in answering the question on family income. Out of the total, 8 per cent did not know what their family income was. For those who did answer, the low bracket of less than \$6,000 (20 per cent) and the high bracket of \$11,000 to \$15,000 (22 per cent) were almost equally shared by the students' families. As shown in Table V, 32 per cent of the vocational nursing students reported

TABLE IV

EDUCATION OF FATHERS OF STUDENTS IN THE STUDENT COMPOSITE  
AND THE THREE NURSING PROGRAMS

Extent of Education	Student Composite		Vocational Nursing Program		Associate Degree Nursing Program		Baccalaureate Degree Nursing Program	
	No.	%	No.	%	No.	%	No.	%
Eighth grade or less	98	31	47	47	43	32	8	10
Twelfth grade or less	95	30	28	28	50	37	17	22
Technical school	10	3	5	5	5	3	0	0
Some college	43	14	13	13	18	13	12	15
Finished college	61	19	6	6	16	12	39	51
Total	307	97	99	99	132	97	76	98

$\chi^2 = 77.62$        $df = 8$        $P < .001$

a family income of less than \$6,000 while only 6 per cent of the baccalaureate degree students reported family income of less than \$6,000. Forty per cent of the baccalaureate degree students reported a family income of over \$15,000, while only 5 per cent of the vocational students reported a family income of over \$15,000. For all student groups the \$7,000 to \$10,000 range was most frequently selected as representative of family income.

The other two groups appeared better informed on family income than was the baccalaureate group, with only 90 per cent reporting. This may be due, to some extent by the difference in age and marital status between the baccalaureate student and the other groups. Approximately one-half of the vocational nursing students and associate degree nursing students were over twenty-nine years of age, and approximately one-third of the students in these two groups were married, which suggests a possibility of more familiarity with handling financial matters than the largely unmarried, younger, baccalaureate students. The baccalaureate students were a group in which 98 per cent were less than twenty-nine years of age and 94 per cent were single. Random interviews revealed some associate degree and some vocational nursing students considered this question on income as being almost too personal, and in one instance was not answered for that reason.

The data in Table V were tested by the chi square method for independence. A significant difference was found at the .001 level of significance. This indicated that there was a relationship between family income and student selection of a particular program, with more students



TABLE V

1969 FAMILY INCOMES OF STUDENTS IN THE STUDENT COMPOSITE  
AND THE THREE NURSING PROGRAMS

Income Groups	Student Composite		Vocational Nursing Program		Associate Degree Nursing Program		Baccalaureate Degree Nursing Program	
	No.	%	No.	%	No.	%	No.	%
Less than \$6,000	64	20	32	32	27	20	5	6
\$7,000 to \$10,000	97	31	34	34	44	33	19	25
\$11,000 to \$15,000	69	22	19	19	37	28	13	17
Over \$15,000	51	16	5	5	15	11	31	40
Don't know	25	8	8	8	9	6	8	10
Total	306	97	98	98	132	98	76	98

 $\chi^2 = 56.032$ 

df = 8

P &lt; .001

having a higher family income in the baccalaureate degree nursing program, whereas the vocational nursing students came from families with lower family income, and the associate degree students occupied an intermediate position as to family income.

#### Rank in High School Graduating Class

The students were asked to indicate, to the best of their knowledge, their rank in their high school graduating class. As shown in Table VI, the student composite was almost equally divided between the top quarter (45 per cent) and the top half (41 per cent) of the graduating class. None of the baccalaureate degree students placed themselves in the bottom half of their class. Nine per cent of the associate degree students, and 28 per cent of the vocational students placed themselves at the bottom half of their graduating class. The data in Table VI were tested by the chi square method for independence. The difference in distributions of class rank was significant at the .001 level. This showed that a relationship existed between the programs which the students selected and their rank in their high school graduating class, with more baccalaureate degree nursing students ranking near the top, and more vocational students ranking themselves near the bottom.

#### Other Background Information

The majority of the students in the study were white (86 per cent). Of the remainder, 3 per cent were Negro, 4 per cent were Mexican-American, 4 per cent were Oriental, and one student listed himself as "Other." As shown in Table VII, among groups the greatest diversity was shown in the

TABLE VI

ACADEMIC RANK IN HIGH SCHOOL GRADUATING CLASS OF STUDENTS  
IN THE STUDENT COMPOSITE AND THE THREE NURSING PROGRAMS

Academic Rank	Student Composite		Vocational Nursing Program		Associate Degree Nursing Program		Baccalaureate Degree Nursing Program	
	No.	%	No.	%	No.	%	No.	%
Top Quarter	139	45	17	17	59	44	63	82
Top Half	126	41	53	54	60	45	13	17
Bottom Half	41	13	28	28	13	9	0	0
Total	306	99	98	99	132	98	76	99

$\chi^2 = 84.022$

df = 4

p < .001

TABLE VII

RACIAL ORIGINS OF STUDENTS IN THE STUDENT COMPOSITE AND THE THREE NURSING PROGRAMS

Race	Student Composite		Vocational Nursing Program		Associate Degree Nursing Program		Baccalaureate Degree Nursing Program	
	No.	%	No.	%	No.	%	No.	%
Negro	11	3	4	4	6	4	1	1
White	266	86	81	81	120	90	65	85
Oriental	15	4	3	3	4	3	8	10
Mexican-American	14	4	11	11	2	1	1	1
Other	1	1	0	0	0	0	1	1
Total	307	98	99	99	132	98	76	98

$\chi^2 = 25.414$

df = 8

p < .01

TABLE VIII

MARITAL STATUS OF STUDENTS IN THE STUDENT COMPOSITE AND THE THREE NURSING PROGRAMS

Marital Status	Student Composite		Vocational Nursing Program		Associate Degree Nursing Program		Baccalaureate Degree Nursing Program	
	No.	%	No.	%	No.	%	No.	%
Single	150	48	38	38	40	30	72	94
Married	124	40	44	44	76	57	4	5
Divorced, separated, widowed	33	10	17	17	16	12	0	0
Total	307	98	99	99	132	99	76	99

$\chi^2 = 89.737$        $df = 4$        $p < .001$

Mexican-American group with 11 per cent in the vocational program, and only 1 per cent in the associate degree and 1 per cent in the baccalaureate degree program.

The marital status of the students is indicated in Table VIII. Of the total group, 48 per cent were single, 40 per cent married and 10 per cent were divorced, separated or widowed. There was a marked difference in marital status of the student groups. Ninety-four per cent of the baccalaureate student group were single. Thirty-eight per cent of the vocational nursing students' group were single, while 30 per cent of the associate degree students were single. None of the baccalaureate students listed themselves as divorced, separated, or widowed. In the total group, 44 per cent had children, as shown in Table IX. Of the group with children, 60 per cent of the vocational students had children and 57 per cent of the associate degree students had children. The total baccalaureate group had the smallest number of children, one child, as is shown in Table X. Both the vocational nursing program and the associate degree program had a large group of students who had home and family responsibilities.

As shown in Table XI, 77 per cent of the student composite group worked sixteen hours or less weekly for self-support. The thirty-four associate degree students were the largest number working sixteen to thirty hours weekly. Seventeen of the vocational students worked thirty hours or more weekly.

The majority of the students in the study had graduated from high school. Sixteen vocational and 2 associate degree students were not high school graduates. The associate degree students were exchange students from Columbia, South America. All of the baccalaureate degree

TABLE IX

NUMBER AND PERCENTAGE OF STUDENTS WITH CHILDREN IN THE STUDENT COMPOSITE AND THE THREE NURSING PROGRAMS

	No.	%	No.	%	No.	%	No.	%
	Student Composite		Vocational Nursing Program		Associate Degree Nursing Program		Baccalaureate Degree Nursing Program	
Students with children	137	44	60	60	76	57	1	1
Students with no children	170	55	39	39	56	42	75	98
Total	307	99	99	99	132	99	76	99
	$\chi^2 = 76.879$				$df = 2$		$p < .001$	

TABLE X

NUMBER OF CHILDREN OF STUDENTS IN THE STUDENT  
COMPOSITE AND THE THREE NURSING PROGRAMS

Number of Children	Student Composite		Vocational Nursing Program		Associate Degree Nursing Program		Baccalaureate Degree Nursing Program	
	No.	%	No.	%	No.	%	No.	%
None	166	54	39	39	52	39	75	98
One	20	6	8	8	11	8	1	1
Two	47	15	19	19	28	21	0	0
Three	36	11	16	16	20	15	0	0
Four or more	38	12	17	17	21	15	0	0
Total	307	98	99	99	132	98	76	99

$\chi^2 = 81.456$

df = 8

P < .001



TABLE XI

NUMBER OF HOURS WORKED WEEKLY FOR SELF-SUPPORT BY THE STUDENTS IN THE STUDENT COMPOSITE AND THE THREE NURSING PROGRAMS

Hours Worked Weekly	Student Composite	Vocational Nursing Program	Associate Degree Nursing Program	Baccalaureate Degree Nursing Program
	No.	No.	No.	No.
	%	%	%	%
16 hours or less	238	76	89	73
16 to 30 hours	43	6	34	3
30 hours or more	26	17	9	0
Total	307	99	132	76
		99	98	99

$\chi^2 = 43.791$        $df = 4$        $P < .001$

nursing students were high school graduates as shown in Table XII. Seventy-seven per cent of the vocational students had completed grade twelve. As noted in Table XIII, the grades completed by vocational students range from eighth grade to twelfth. No significant difference was found for differences in groups related to size and type of high school attended as shown in Table XIV. The high school courses which the participating students enjoyed most are shown in Table XV. Science courses were the first choice of 37 per cent of the students, followed by English (21 per cent), mathematics and others not listed were each 14 per cent, and physical education (12 per cent). Sixty-four per cent of the baccalaureate students indicated their preference for sciences, as did 34 per cent of the associate degree students, however, 29 per cent of the vocational students indicated a preference for physical education. Of the associate degree students, 6 per cent indicated they had enjoyed physical education in high school, but none of the baccalaureate students indicated a preference for physical education courses.

The majority of students did not enter the nursing program immediately after high school graduation as shown in Table XVI. Ninety per cent entered later. This group included all of the baccalaureate students since two years pre-nursing courses were required.

Fifty-five vocational students, and twenty-two associate degree students were without schooling between high school and the nursing program entrance. An examination of Table XVII shows the number of students who enrolled in various types of programs prior to entering the present program. Seventy-seven per cent of the vocational students and 52 per cent of the

TABLE XII

NUMBER AND PERCENTAGE OF STUDENTS THAT ARE HIGH SCHOOL GRADUATES FOR THE STUDENT COMPOSITE AND THE THREE NURSING PROGRAMS

	Student Composite		Vocational Nursing Program		Associate Degree Nursing Program		Baccalaureate Degree Nursing Program	
	No.	%	No.	%	No.	%	No.	%
Students that are High School Graduates	289	94	83	83	130	98	76	100
Students that are non-High School Graduates	18	5	16	16	2	1	0	0
Total	307	99	99	99	132	99	76	100

$\chi^2 = 28.278$

df = 2

P < .001

TABLE XIII

LAST GRADE COMPLETED BY THE STUDENTS IN THE STUDENT COMPOSITE  
AND THE THREE NURSING PROGRAMS

Last Grade Completed	Student Composite		Vocational Nursing Program		Associate Degree Nursing Program		Baccalaureate Degree Nursing Program	
	No.	%	No.	%	No.	%	No.	%
8th Grade or less	3	0	3	3	0	0	0	0
9th	3	0	3	3	0	0	0	0
10th	7	2	7	7	0	0	0	0
11th	12	3	9	9	3	2	0	0
Completed 12th Grade	282	91	77	77	129	97	76	100
Total	307	96	99	99	132	99	76	100

$\chi^2 = 41.169$        $df = 8$        $p < .001$

TABLE XIV

SIZE AND TYPE OF HIGH SCHOOL FROM WHICH THE STUDENTS IN THE STUDENT COMPOSITE  
AND IN THE THREE NURSING PROGRAMS GRADUATED

Size and Type of High School	Student Composite		Vocational Nursing Program		Associate Degree Nursing Program		Baccalaureate Degree Nursing Program	
	No.	%	No.	%	No.	%	No.	%
Public, over 1,000 students	185	60	52	52	81	61	52	68
Public, less than 1,000 students	82	26	33	33	32	24	17	22
Private school	39	12	14	14	18	13	7	9
Total	306	98	99	99	131	98	76	99
		$\chi^2 = 5.276$		$df = 4$				NS

TABLE XV

FIELDS OF STUDY MOST ENJOYED BY STUDENTS IN THE STUDENT COMPOSITE AND THE THREE NURSING PROGRAMS

Courses and Areas of Study	Student Composite		Vocational Nursing Program		Associate Degree Nursing Program		Baccalaureate Degree Nursing Program	
	No.	%	No.	%	No.	%	No.	%
Sciences	115	37	21	21	45	34	49	64
Mathematics	44	14	10	10	29	21	5	6
English	65	21	19	19	33	25	13	17
Physical Education	38	12	29	29	9	6	0	0
Others not listed	45	14	20	20	16	12	9	11
Total	307	98	99	99	132	98	76	98

$\chi^2 = 72.324$

df = 8

p < .001

TABLE XVI

TIME OF STUDENT ENTRY INTO NURSING PROGRAMS FOR THE STUDENT COMPOSITE AND THE THREE NURSING PROGRAMS

	No.	%	Student Composite	Vocational Nursing Program	Associate Degree Nursing Program	Baccalaureate Degree Nursing Program
	No.	%	No.	%	No.	%
Students entering directly after high school graduation	29	9	12	12	17	0
Students entering later	278	90	87	87	115	100
Total	307	99	99	99	132	76

\* Statistical analysis was not done - all students in the baccalaureate degree nursing program entered later.

TABLE XVII

TYPES OF PROGRAMS IN WHICH STUDENTS HAD ENROLLED PRIOR TO ENTERING PRESENT SCHOOL -  
FOR THE STUDENT COMPOSITE AND THE THREE NURSING PROGRAMS

Type of Program	No.	%	Student Composite	No.	%	Vocational Nursing Program	No.	%	Associate Degree Nursing Program	No.	%	Baccalaureate Degree Nursing Program	No.	%
Vocational Nursing Program	13	5	1	2	10	0	0	0	0	0	0	0	0	0
Hospital (diploma) Nursing Program	16	6	5	11	10	0	0	0	0	0	0	0	0	0
Associate Degree Nursing Program	9	3	3	6	2	3	3	2	3	3	3	3	3	3
Associate Degree Non-nursing Program	123	53	34	77	52	*	31	40	40	40	40	40	40	40
Another type not listed	69	30	1	2	23	*	42	55	55	55	55	55	55	55
Total	230	97	44	98	97	76	98	98	98	98	98	98	98	98

$\chi^2 = 55.775$

df = 8

p < .001

\* Baccalaureate degree nursing program requirements are for two years pre-nursing courses.



associate degree students showing attendance in the associate degree non-nursing program might be an indication of the large numbers completing other college courses while awaiting admission to the nursing programs. Forty per cent of the baccalaureate degree nursing students indicated attendance at an associate degree non-nursing program. The hypothesis tested was that the students in the three programs would differ in age, educational level of father, family income, and standing in high school graduating class. The data from this study clearly support this hypothesis.

Hypothesis II. Students in the three programs will show differing forces having the most influence on them in selecting nursing as an occupation, and students will differ in reasons for program choice.

The second part of the student questionnaire focused on when the participating student made a career choice, and why they chose the type of program in which they were currently enrolled, and what they expected to do after graduation. The questions were directed toward the variables specified in the second hypothesis and other information related to occupational choice and career expectations. A questionnaire was obtained from the participating counselors giving their perception of the reasons for student selection of nursing as an occupation, and what was most influential in that choice, as background information.

The ages at which the students made career decisions are shown in Table XVIII. Two-thirds of the students in the composite groups (66 per cent) had decided to study nursing before they were twenty-one years of age. The data reported in Table XVIII showed that over one third of the

TABLE XVIII

AGE AT WHICH THE STUDENTS IN THE STUDENT COMPOSITE AND IN EACH OF THE THREE NURSING PROGRAMS DECIDED TO STUDY NURSING

Age Intervals	Student Composite		Vocational Nursing Program		Associate Degree Nursing Program		Baccalaureate Degree Nursing Program	
	No.	%	No.	%	No.	%	No.	%
In grammar school	47	15	13	13	17	12	17	22
In adolescence	78	25	19	19	38	28	21	27
18 - 21	79	25	30	30	18	13	31	40
Since age 21	103	33	37	37	59	44	7	9
Total	307	98	99	99	132	97	76	98

$\chi^2 = 39.281$

df = 6

$p < .001$

vocational nursing students and almost one-half of the associate degree nursing students made the decision to study nursing at an older age than the baccalaureate degree students. Less than ten per cent of the baccalaureate degree students choose nursing as a career after age twenty-one. The data reported in Table XIX showed other occupations considered. Although the majority of students had decided on nursing at a relatively early age, two-thirds of them had given serious consideration to preparing for another occupation. For the total group, of those occupations listed, teaching was the most frequently indicated as a possible occupational field. Over two-thirds of the baccalaureate degree nursing students had considered the teaching field. Almost one-third of the total vocational nursing students had given consideration to the associate degree nursing program. Two-thirds of the total student group had considered another occupation as shown in Table XX.

#### Forces Influential in the Choice of Nursing as a Career

The forces which had influenced the students in their choice of nursing were explored. They were asked to rate these influences as first, second and third in importance to them in reaching a decision. The data in Tables XXI, XXII, and XXIII, which present the students' three most important reasons for choosing a career in nursing, were tested by the chi square method for independence. In all three instances, the distributions were not statistically different. This seemed to indicate that the influences upon the students in selection of their careers were shared in common and were unrelated to the type of program in which they were enrolled. The most frequently chosen response as to influence of most importance was that

TABLE XIX

OTHER OCCUPATIONS WHICH WERE CONSIDERED BY THE STUDENTS IN THE STUDENT COMPOSITE AND IN EACH OF THE THREE NURSING PROGRAMS

	No.	%	Student Composite	No.	%	Vocational Nursing Program	No.	%	Associate Degree Nursing Program	No.	%	Baccalaureate Degree Nursing Program
Vocational Nursing	2	1	0	0	0	2	2	0	0	0	0	0
Associate Degree Nursing	29	15	29	43	0	0	0	0	0	0	0	0
Baccalaureate Degree Nursing	39	20	7	10	32	35	0	0	0	0	0	0
Teaching	83	43	24	35	35	39	24	70				
Associated Medical Oriented Services	36	19	7	10	19	21	10	29				
Total	189	98	67	98	88	98	34	99				

$\chi^2 = 87.707$

df = 8

$p < .001$

TABLE XX

NUMBER AND PERCENTAGE OF STUDENTS IN THE STUDENT COMPOSITE AND IN THE THREE NURSING PROGRAMS WHO CONSIDERED OR DID NOT CONSIDER AN OCCUPATION OTHER THAN NURSING

	Student Composite		Vocational Nursing Program		Associate Degree Nursing Program		Baccalaureate Degree Nursing Program	
	No.	%	No.	%	No.	%	No.	%
Considered another occupation	204	66	67	67	88	66	49	64
Did not consider occupation other than nursing	103	33	32	32	44	33	27	35
Total	307	99	99	99	132	99	76	99
	$\chi^2 = 0.203$				df = 2		NS	

TABLE XXI

INFLUENCE OF MOST IMPORTANCE TO THE STUDENTS IN THE STUDENT COMPOSITE AND THE THREE NURSING PROGRAMS IN THEIR SELECTION OF NURSING AS AN OCCUPATION

Influences	Student Composite		Vocational Nursing Program		Associate Degree Nursing Program		Baccalaureate Degree Nursing Program	
	No.	%	No.	%	No.	%	No.	%
Close family member	111	36	34	34	44	33	33	41
High school counselor	7	2	3	3	3	2	1	1
Friends who are nurses or nursing students	53	17	23	23	24	18	6	7
Community college counselor	4	1	1	1	2	1	1	1
Your own decision	132	42	38	38	59	44	35	46
Total	307	98	99	99	132	98	76	98

$\chi^2 = 8.871$

df = 8

NS

TABLE XXII

INFLUENCE SECOND IN IMPORTANCE TO THE STUDENTS IN THE STUDENT COMPOSITE  
AND THE THREE NURSING PROGRAMS IN THEIR SELECTION OF NURSING  
AS AN OCCUPATION

Influences	Student Composite		Vocational Nursing Program		Associate Degree Nursing Program		Baccalaureate Degree Nursing Program		
	No.	%	No.	%	No.	%	No.	%	
Close family member	70	22	25	25	28	21	17	22	
High school counselor	13	4	6	6	5	3	2	2	
Friends who are nurses or nursing students	71	23	22	22	32	24	17	22	
Community college counselor	9	2	3	3	5	3	1	1	
Your own decision	144	46	43	43	62	46	39	51	
Total	307	97	99	99	132	97	76	98	
		$\chi^2 = 3.421$		df = 8		NS			

TABLE XXIII

INFLUENCE THIRD IN IMPORTANCE TO THE STUDENTS IN THE STUDENT COMPOSITE AND THE THREE NURSING PROGRAMS IN THEIR SELECTION OF NURSING AS AN OCCUPATION

Influences	Student Composite		Vocational Nursing Program		Associate Degree Nursing Program		Baccalaureate Degree Nursing Program	
	No.	%	No.	%	No.	%	No.	%
Close family member	22	7	4	4	12	9	6	8
High school counselor	22	7	10	10	8	6	4	5
Friends who are nurses or nursing students	52	17	17	17	21	16	14	18
Community college counselor	29	9	10	10	16	12	3	4
Your own decision	179	58	58	58	74	56	47	63
Total	304	98	99	99	131	99	74	98

$\chi^2 = 7.820$

df = 8

NS



of the students' own decision.

The counselor group was asked to rate the influences they believed to be first, second and third in importance to choosing a career in nursing for the students in each program.

The data in Tables XXIV, XXV, and XXVI which present the counselors' perception of the three most important influences upon the student, were tested by the chi square method for independence without significant difference being shown for the influence of most importance, and the influence second in importance. A significant difference was shown for the third most important influence. Perusal of Table XXVI, the influence third in importance upon the students in helping them reach their career decision, shows the counselors perceive the high school counselor as being an influence on more than one third of the vocational nursing students, and the college counselor was an influence for over one third of the associate degree nursing students, as perceived by the counselors. This was in contrast to the students' perception that influences from the counselor at the high school and college level was practically non-existent as shown in Tables XXVII and XXVIII.

Table XXVII shows that only 10 per cent of the total students felt they had received assistance from high school counselors in reaching their career decision, while 89 per cent responded they did not receive help from high school counselors in career selection. The data were significantly different at the .05 level of significance. A question to explore the help students felt they had received from college counselors to reach their career decision was not significant as shown in Table XXVIII.

TABLE XXIV

COUNSELOR PERCEPTION OF THE MOST INFLUENTIAL FACTOR ON THE  
NURSING STUDENT IN HER NURSING OCCUPATION CHOICE

Influences	Vocational Nursing Students		Associate Degree Nursing Students		Baccalaureate Degree Nursing Students	
	No.	%	No.	%	No.	%
Close family members	11	28	14	36	11	28
High school counselor	1	2	4	10	7	18
Friends who are nurses or nursing students	17	44	11	28	11	28
Community college counselors	2	5	3	7	4	10
Student's own decision	7	18	6	15	5	13
Total	38	97	38	96	38	97
	$\chi^2 = 7.846$		df = 8		NS	

TABLE XXV

COUNSELORS PERCEPTION OF INFLUENCE SECOND IN IMPORTANCE TO  
THE NURSING STUDENT IN HER NURSING OCCUPATION CHOICE

Influences	Vocational Nursing Students		Associate Degree Nursing Students		Baccalaureate Degree Nursing Students	
	No.	%	No.	%	No.	%
Close family members	13	34	9	23	9	23
High school counselor	6	15	9	23	6	15
Friends who are nurses or nursing students	9	23	12	31	14	36
Community college counselors	4	10	5	13	7	18
Student's own decision	6	15	3	7	2	5
Total	38	97	38	97	38	97
	$\chi^2 = 6.214$		df = 8		NS	

TABLE XXVI

COUNSELORS PERCEPTION OF INFLUENCE THIRD IN IMPORTANCE TO  
THE NURSING STUDENT IN HER NURSING OCCUPATION CHOICE

Influences	Vocational Nursing Students		Associate Degree Nursing Students		Baccalaureate Degree Nursing Students	
	No.	%	No.	%	No.	%
Close family members	5	13	5	13	8	21
High school counselor	17	44	7	18	6	15
Friends who are nurses or nursing students	6	15	6	15	13	34
Community college counselors	5	13	15	39	6	15
Student's own decision	5	13	5	13	5	13
Total	38	98	38	98	38	98
	$\chi^2 = 19.320$		df = 8		P < .05	

TABLE XXVII

NUMBER AND PERCENTAGE OF STUDENTS IN THE STUDENT COMPOSITE AND THE THREE NURSING PROGRAMS WHO RECEIVED HELP IN CAREER SELECTION FROM HIGH SCHOOL COUNSELORS

	Student Composite		Vocational Nursing Program		Associate Degree Nursing Program		Baccalaureate Degree Nursing Program	
	No.	%	No.	%	No.	%	No.	%
Received help	32	10	17	17	11	8	4	5
Did not receive help	275	89	82	82	121	91	72	94
Total	307	99	99	99	132	99	76	99
		$\chi^2 = 7.614$		$df = 2$		$P < .05$		

TABLE XXVII

NUMBER AND PERCENTAGE OF STUDENTS IN THE STUDENT COMPOSITE AND THE THREE NURSING PROGRAMS WHO RECEIVED HELP IN CAREER SELECTION FROM COLLEGE COUNSELORS

	Student Composite		Vocational Nursing Program		Associate Degree Nursing Program		Baccalaureate Degree Nursing Program	
	No.	%	No.	%	No.	%	No.	%
Received help	44	14	20	20	16	12	8	10
Did not receive help	263	85	79	79	116	87	68	89
Total	307	99	99	99	132	99	76	99
		$\chi^2 = 4.200$		$df = 2$				NS

The students' satisfaction with their career choice is shown in Table XXIX. No significant difference among groups is shown, which indicates students in the three programs did not differ significantly in degree of satisfaction or dissatisfaction.

The students were asked to indicate the importance of four reasons for selecting the career of nursing. As shown in Table XXX, "general interest in and liking for people," and in Table XXXI, "Interest in the medical field," each of these reasons were moderately important to 81 per cent of the student composite group. "Worthy use of one's life," in Table XXXII, was moderately important to 73 per cent of the total group. "Interest in keeping people well," was important to 74 per cent of the total student group.

#### Reasons for Program Choice

Students were asked to rate these influences as first, second, and third in importance to them in ascertaining the reasons for selecting the type of program in which they were presently enrolled. For this ranking each individual chose one of the five responses one time only. The influence of most importance to the vocational nursing student was "type of program which best prepares me for what I want to do." Of most importance to the associate degree nurse was the response "cost of program best prepares me for what I want to do," and to the baccalaureate "type of program best prepares me for what I want to do" was most important. The data in Table XXXIV shows that 50 per cent of the composite student group selected the response "type of program which best prepares me for what I want to do," as the influence of most importance.

TABLE XXIX

NUMBER AND PERCENTAGE OF STUDENTS IN THE STUDENT COMPOSITE AND IN THE THREE NURSING PROGRAMS WHO WERE SATISFIED OR DISSATISFIED WITH THEIR CAREER CHOICE

	Student Composite		Vocational Nursing Program		Associate Degree Nursing Program		Baccalaureate Degree Nursing Program		
	No.	%	No.	%	No.	%	No.	%	
Satisfied	274	89	83	83	123	93	68	89	
Dissatisfied	33	10	16	16	9	6	8	10	
Total	307	99	99	99	132	99	76	99	
$\chi^2 = 5.153$								$df = 2$	
								NS	



TABLE XXX

GENERAL INTEREST IN AND LIKING FOR PEOPLE AS A REASON FOR SELECTING  
THE CAREER OF NURSING

	Student Composite		Vocational Nursing Program		Associate Degree Nursing Program		Baccalaureate Degree Nursing Program	
	No.	%	No.	%	No.	%	No.	%
Not Important	28	9	16	16	9	6	3	3
Slightly Important	26	8	5	5	15	11	6	7
Moderately Important	128	41	46	46	54	40	28	36
Of Great Importance	125	40	32	32	54	40	39	51
Total	307	98	99	99	132	97	76	97
		$\chi^2 = 15.880$			$df = 6$			$P < .05$

TABLE XXXI

INTEREST IN THE MEDICAL FIELD AS A REASON FOR SELECTING  
THE CAREER OF NURSING

	Student Composite		Vocational Nursing Program		Associate Degree Nursing Program		Baccalaureate Degree Nursing Program	
	No.	%	No.	%	No.	%	No.	%
Not Important	32	10	16	16	14	10	2	2
Slightly Important	24	7	9	9	13	9	2	2
Moderately Important	126	41	43	43	54	40	29	38
Of Great Importance	125	40	31	31	51	38	43	56
Total	307	98	99	99	132	97	76	98

$\chi^2 = 18.354$        $df = 6$        $P < .01$

TABLE XXXII

WORTHY USE OF ONE'S LIFE AS A REASON FOR SELECTING  
THE CAREER OF NURSING

	Student Composite		Vocational Nursing Program		Associate Degree Nursing Program		Baccalaureate Degree Nursing Program	
	No.	%	No.	%	No.	%	No.	%
Not Important	34	11	16	16	14	10	4	5
Slightly Important	46	14	15	15	14	10	17	22
Moderately Important	122	39	37	37	58	43	27	35
Of Great Importance	105	34	31	31	46	34	28	36
Total	307	98	99	99	132	97	76	98
		$\chi^2 = 10.591$		df = 6		NS		

TABLE XXXIII

INTEREST IN KEEPING PEOPLE WELL AS A REASON FOR SELECTING  
THE CAREER OF NURSING

	Student Composite		Vocational Nursing Program		Associate Degree Nursing Program		Baccalaureate Degree Nursing Program	
	No.	%	No.	%	No.	%	No.	%
Not Important	29	9	13	13	8	6	8	10
Slightly Important	46	14	11	11	19	14	16	21
Moderately Important	150	48	38	38	75	56	37	48
Of Great Importance	82	26	37	37	30	22	15	19
Total	307	97	99	99	132	98	76	98
	$\chi^2 = 16.326$				df = 6		P < .05	

TABLE XXXIV

INFLUENCE OF MOST IMPORTANCE TO THE STUDENTS IN THE STUDENT COMPOSITE AND THE THREE NURSING PROGRAMS AS THE STUDENTS REASONS FOR SELECTION OF THE PROGRAM IN WHICH PRESENTLY ENROLLED

Reasons	Student Composite		Vocational Nursing Program		Associate Degree Nursing Program		Baccalaureate Degree Nursing Program	
	No.	%	No.	%	No.	%	No.	%
Cost of program best suited financial resources	87	28	24	24	62	46	1	1
Type of program best prepares for what want to do	154	50	45	45	57	43	52	68
Opportunity for college experience	18	5	0	0	4	3	14	18
Opportunity to earn college credit	11	3	1	1	4	3	6	7
I could meet admission requirements	37	12	29	29	5	3	3	3
Total	307	98	99	99	132	98	76	97

$\chi^2 = 113.086$

df = 8

$P < .001$

Table XXXV presents the reason second in importance for student program choice with different reasons shown for each group. Approximately one-third of the vocational students chose the response "cost of the program best suited my financial resources." Approximately one-third of the students in the associate degree program selected the reason "type of program which best prepares me for what I want to do." Of the baccalaureate student group, almost one-half listed an "opportunity for a college experience" as the reason second in importance in program selection. For the third important reason for program selection, presented in Table XXXVI, one-half of the baccalaureate students selected "opportunity to earn college credit," one-quarter of the associate degree students selected "cost of program best suited my financial resources," and over one-third of the vocational students chose "I could meet the admission requirements."

The data from Tables XXXIV, XXXV, and XXXVI were tested by the chi square method for independence. A significant difference was found at the .001 level of significance. This indicated that there was a relationship between importance of reason for program choice and student selection of a particular program.

The participating counselor group was asked to rate the influences they believed to be first, second and third in importance to the students in each program in their selection of the particular program in which they were enrolled. The counselor group, as shown in Table XXXVII, selected the most important reason for student choice of program for the vocational student as being "cost of program best suited my financial

TABLE XXXV

INFLUENCE SECOND IN IMPORTANCE TO THE STUDENTS IN THE STUDENT COMPOSITE AND THE THREE NURSING PROGRAMS AS THE STUDENTS REASONS FOR SELECTION OF THE PROGRAM IN WHICH PRESENTLY ENROLLED

Reasons	No.	%	Student Composite	Vocational Nursing Program	Associate Degree Nursing Program	Baccalaureate Degree Nursing Program
			No.	%	No.	%
Cost of Program best suited financial resources	69	22	37	37	29	21
Type program best prepares for what want to do	69	22	18	18	40	30
Opportunity for college experience	78	25	13	13	29	21
Opportunity to earn college credit	47	15	7	7	22	16
I could meet the admission requirements	42	13	24	24	12	9
Total	305	97	99	99	132	97

$X^2 = 69.294$

df = 8

$P < .001$

TABLE XXXVI

INFLUENCE THIRD IN IMPORTANCE TO THE STUDENTS IN THE STUDENT COMPOSITE AND THE THREE NURSING PROGRAMS AS THE STUDENTS REASONS FOR SELECTION OF THE PROGRAM IN WHICH PRESENTLY ENROLLED

Reasons	Student Composite		Vocational Nursing Program		Associate Degree Nursing Program		Baccalaureate Degree Nursing Program	
	No.	%	No.	%	No.	%	No.	%
Cost of program best suited financial resources	61	19	17	17	36	27	8	10
Type program best prepares for what want to do	40	13	21	21	12	9	7	9
Opportunity for college experience	48	15	15	15	25	18	8	10
Opportunity to earn college credit	78	25	8	8	32	24	38	50
I could meet the admission requirements	80	26	38	38	27	20	15	19
Total	307	98	99	99	132	98	76	98

$\chi^2 = 55.445$

df = 8

P < .001



TABLE XXXVII  
 COUNSELOR'S PERCEPTION OF NURSING STUDENTS MOST IMPORTANT  
 REASON FOR SELECTION OF THE PROGRAM IN WHICH ENROLLED

Reasons	Vocational Nursing Students		Associate Degree Nursing Students		Baccalaureate Degree Nursing Students	
	No.	%	No.	%	No.	%
Cost of program best suited financial resources	24	63	12	31	6	15
Type program best prepares for what wants to do	8	21	20	52	21	55
Opportunity for college experience	1	2	0	0	5	13
Opportunity to earn college credit	0	0	1	2	6	15
Student could meet admission requirements	5	13	5	13	0	0
Total	38	99	38	98	38	98
	$\chi^2 = 39.265$		df = 8		P < .001	

resources" (63 per cent), for associate degree student "type of program which best prepares me for what I want to do" (52 per cent), and for the baccalaureate degree student "type of program which best prepares me for what I want to do" (55 per cent). In Table XXXVIII, the reason second in importance, is shown to be for the vocational student "cost of program best suited my financial resources," and 65 per cent of the counselor group viewed this same reason for the associate degree student, while the second most important reason for the baccalaureate student was "opportunity for college experience" (39 per cent). The third most important reason, as shown in Table XXXIX, is seen by (63 per cent) of the counselor group for the vocational student, and by (44 per cent) of the counselor group for the associate degree student, as being "cost of program which best suited my financial resources." The third most important reason for program selection as indicated by the counselor group (44 per cent) for the baccalaureate students is "type of program which best prepares me for what I want to do." For both the vocational student and the associate degree student, the counselors considered financial resources to be an importance factor in program choice.

The total per cent of dissatisfied students were only 16 per cent of the total student group, as shown in Table XL. However, a few students in the vocational nursing program and the associate degree program would choose differently a second time. In Table XLI is shown the other types of program which dissatisfied students would choose a second time. The associate degree program was the most frequently selected alternative for the dissatisfied vocational nursing student, and the baccalaureate degree

TABLE XXXVIII

COUNSELOR'S PERCEPTION OF NURSING STUDENTS SECOND MOST IMPORTANT REASON FOR SELECTION OF THE PROGRAM IN WHICH ENROLLED

Reasons	Vocational Nursing Students		Associate Degree Nursing Students		Baccalaureate Degree Nursing Students	
	No.	%	No.	%	No.	%
Cost of program best suited financial resources	27	71	25	65	3	7
Type program best prepares for what wants to do	5	13	4	10	7	18
Opportunity for college experience	2	5	5	13	15	39
Opportunity to earn college credit	0	0	2	5	13	34
Student could meet admission requirements	4	10	2	5	0	0
Total	38	99	38	98	38	98
	$\chi^2 = 56.457$		df = 8		P < .001	

TABLE XXXIX

COUNSELOR'S PERCEPTION OF NURSING STUDENTS THIRD MOST IMPORTANT REASON FOR SELECTION OF THE PROGRAM IN WHICH ENROLLED

Reasons	Vocational Nursing Students		Associate Degree Nursing Students		Baccalaureate Degree Nursing Students	
	No.	%	No.	%	No.	%
Cost of program best suited financial resources	24	63	17	44	1	2
Type program best prepares for what wants to do	3	7	3	7	17	44
Opportunity for college experience	4	10	10	26	8	21
Opportunity to earn college credit	5	13	7	18	10	26
Student could meet admission requirements	2	5	1	2	2	5
Total	38	98	38	97	38	98
	$\chi^2 = 41.573$		df = 8		P < .001	

TABLE XI

NUMBER AND PERCENTAGE OF STUDENTS IN THE STUDENT COMPOSITE AND IN EACH OF THE THREE NURSING PROGRAMS WHO WERE SATISFIED OR DISSATISFIED WITH THEIR PROGRAM SELECTION

	Student Composite		Vocational Nursing Program		Associate Degree Nursing Program		Baccalaureate Degree Nursing Program	
	No.	%	No.	%	No.	%	No.	%
Satisfied	254	83	69	69	110	85	75	98
Dissatisfied	50	16	30	30	19	14	1	1
Total	304	99	99	99	129	99	76	99

$\chi^2 = 26.770$        $df = 2$        $P < .001$

TABLE XLI

OTHER TYPES OF PROGRAMS WHICH THE DISSATISFIED STUDENTS IN THE STUDENT COMPOSITE AND IN EACH OF THE THREE NURSING PROGRAMS WOULD CHOOSE A SECOND TIME

Types of Nursing Education Programs	Student Composite		Vocational Nursing Program		Associate Degree Nursing Program		Baccalaureate Degree Nursing Program	
	No.	%	No.	%	No.	%	No.	%
Vocational Nursing	4	8	4	13	0	0	0	0
Associate Degree	21	42	17	56	4	21	0	0
Diploma	4	8	1	3	3	15	0	0
Baccalaureate State College	14	28	6	20	8	42	0	0
Baccalaureate University	6	12	2	6	4	21	0	0
Total	49	98	30	98	19	99	0	0

$$\chi^2 = 12.143$$

$$df = 4$$

$$P < .05$$

program appeared to be selected most by the dissatisfied associate degree student. Student choice of program if finances and distance were not considerations in the choice showed 93 per cent of the baccalaureate students would continue with present program. The favorite program selection for all students, as shown in Table XLII, was the baccalaureate degree program.

The students' career plans were assessed from three different approaches. They were asked to indicate (1) the type of nursing activity they anticipated selecting for their first position; (2) the type of nursing activity they would choose if they could make their selection on the basis of what appealed to them most, regardless of what their educational program had prepared them to do, and (3) the type of nursing position which they hoped to have eventually. It is shown in Table XLIII that 78 per cent of the student composite anticipated that they would begin their careers as staff nurses in a general hospital. Only 5 per cent of the student composite anticipated immediate employment as head nurses in a hospital. Seven vocational nursing students and four associate degree nursing students selected the head nurse position, however, the baccalaureate degree student was the only student prepared according to the program objectives for the immediate position as head nurse.

When the students were asked to indicate the type of position which had the greatest appeal for them, regardless of their preparation, there was a variation between the reality of what they were prepared to do, and what they would like to do, as shown in Table XLIV. Hospital staff nurse was the choice of 34 per cent of the student composite. Operating room

TABLE XLII

STUDENT CHOICE OF PROGRAM IF FINANCES AND DISTANCE WERE NOT CONSIDERATIONS IN THE CHOICE FOR STUDENT COMPOSITE AND THE THREE NURSING PROGRAMS

Type of Program	No.	%	No.	%	No.	%	No.	%	
		Student Composite	Vocational Nursing Program	Associate Degree Nursing Programs	Baccalaureate Degree Nursing Program				
Vocational nursing program	33	10	32	32	1	0	0	0	
Hospital (diploma) nursing program	65	21	30	30	36	27	0	0	
Associate Degree nursing program	20	6	9	9	11	8	0	0	
4-year State College nursing program	70	22	17	17	48	36	5	6	
5-year University nursing program	118	38	11	11	36	27	71	93	
Total	307	97	99	99	132	98	76	99	
						df = 8		P < .001	
						X <sup>2</sup> = 195.969			



TABLE XLIII :

EXPECTATIONS OF EMPLOYMENT FOR FIRST POSITION AFTER GRADUATION OF THE STUDENTS IN THE  
STUDENT COMPOSITE AND THE THREE NURSING PROGRAMS

Nursing Activities	Student Composite		Vocational Nursing Program		Associate Degree Nursing Program		Baccalaureate Degree Nursing Program	
	No.	%	No.	%	No.	%	No.	%
Staff nurse - general hospital	236	78	78	78	99	75	59	83
Private duty nursing	10	3	6	6	4	3	0	0
Nursing in psychiatric hospital	32	10	6	6	22	16	4	5
Nursing in a nursing home	5	1	2	2	2	1	1	1
Head nursing in a hospital	18	5	7	7	4	3	7	9
Total	301	97	99	99	131	98	71	98

 $\chi^2 = 17.228$ 

df = 8

P &lt; .05

TABLE XLIV

TYPE OF NURSING ACTIVITY WHICH HAD THE MOST APPEAL FOR THE FIRST POSITION AFTER GRADUATION FOR THE STUDENTS IN THE STUDENT COMPOSITE AND THE THREE NURSING PROGRAMS

Nursing Activities	Student Composite		Vocational Nursing Program		Associate Degree Nursing Program		Baccalaureate Degree Nursing Program	
	No.	%	No.	%	No.	%	No.	%
Staff Nursing-general hosp.	104	34	37	37	43	33	24	31
Private duty nursing	4	1	1	1	3	2	0	0
Office nursing	21	6	11	11	7	5	3	3
Public health nursing	50	16	8	8	26	20	16	21
School or industrial nursing	16	5	4	4	10	7	2	2
Nursing-psychiatric hosp.	12	3	1	1	9	6	2	2
Nursing-nursing home	2	0	1	1	1	0	0	0
Operating room nursing	58	19	28	28	14	10	16	21
Head nursing-hospital	13	4	3	3	5	3	5	6
Teacher-school of nursing	25	8	5	5	12	9	8	10
Total	305	95	99	99	130	95	76	96

 $\chi^2 = 34.107$ 
 $df = 18$ 
 $P < .05$

nursing was chosen by 19 per cent of the student composite group. Sixteen per cent of the student composite chose public health nursing as the position with the most appeal. The sixteen baccalaureate students had received preparation for this field, but the twenty-six associate degree nursing students, and the eight vocational nursing students to whom this field appeals had not received this preparation. A discrepancy was shown between what their vocational and associate degree nursing education program was preparing them to do and what the students would like to do.

In Table XLV are shown the students' responses to the question, "what type of nursing position would you like to have eventually?". Obviously, many of these students did not want to remain at the staff nurse level. Hospital head nurse was the choice by 24 per cent of the student composite, hospital staff nurse (20 per cent) and public health nurse (15 per cent) were the next choices.

The students were asked their plans for further education after the completion of their present programs and how soon they planned to enroll. As shown in Table XLVI, 73 per cent of the students in the student composite anticipated continuing with some type of formal education after graduation. The types of educational programs in which the students planned to enroll is shown in Table XLVII. Of the baccalaureate students who anticipated further education, over one-half, (63 per cent) were planning to enroll in a master's program with a major in nursing. Almost one-half of the associate degree students planning further education stated intention of enrolling in a baccalaureate program with a major in nursing. Of the total students indicating plans for further education, 26 per cent

TABLE XLV

EXPECTATIONS OF EVENTUAL EMPLOYMENT OF THE STUDENTS IN THE STUDENT COMPOSITE  
AND THE THREE NURSING PROGRAMS

Nursing Activities	Student Composite		Vocational Nursing Program		Associate Degree Nursing Program		Baccalaureate Degree Nursing Program	
	No.	%	No.	%	No.	%	No.	%
Hospital staff nurse	61	20	31	31	26	20	4	5
Hospital head nurse	72	24	9	9	40	30	23	31
Hospital nursing service administrator	7	2	0	0	4	3	3	4
Public health nurse	47	15	10	10	22	16	15	20
Public health nursing supv.	15	5	2	2	6	4	7	9
Office nurse-doctor's off.	36	12	22	22	9	6	5	6
Private duty nurse	7	2	4	4	3	2	0	0
School nurse	17	5	6	6	6	4	5	6
Teacher-school of nursing	35	11	11	11	14	10	10	13
Director-school of nursing	3	1	2	2	0	0	1	1
Total	300	97	97	97	130	95	73	95

 $\chi^2 = 58.689$ 
 $df = 18$ 
 $P < .001$

TABLE XLVI

NUMBER AND PERCENTAGE OF STUDENTS IN THE STUDENT COMPOSITE AND THE THREE NURSING PROGRAMS WHO WERE PLANNING OR NOT PLANNING TO CONTINUE THEIR EDUCATION

	No.	%	Student Composite	Vocational Nursing Program	Associate Degree Nursing Program	Baccalaureate Degree Nursing Program
			No.	%	No.	%
Plan going on to school after finishing	227	73	66	66	88	73
Not planning to go on	80	26	33	33	44	3
Total	307	99	99	99	132	99
	$\chi^2 = 25.629$			$df = 2$		$P < .001$

TABLE XLVII

TYPES OF EDUCATIONAL PROGRAMS IN WHICH THE STUDENTS IN THE STUDENT COMPOSITE AND THE THREE NURSING PROGRAMS ANTICIPATED ENROLLING AFTER GRADUATION FROM PRESENT PROGRAM

Educational Programs	Student Composite		Vocational Nursing Program		Associate Degree Nursing Program		Baccalaureate Degree Nursing Program	
	No.	%	No.	%	No.	%	No.	%
Associate major in nursing	44	20	44	65	0	0	0	0
Associate non-nursing major	8	3	3	4	5	4	0	0
Baccalaureate major-nursing	50	23	4	5	46	45	0	0
Baccalaureate non-major nursing	16	7	2	2	12	11	2	4
Masters major-nursing	57	26	2	2	24	23	31	63
Masters non-major nursing	15	6	3	4	3	2	9	18
Adult education courses	27	12	9	13	11	10	7	14
Total	217	97	67	95	101	95	49	99

 $\chi^2 = 200.212$ 
 $df = 12$ 
 $P < .05$

planned to enroll in a master's program with a major in nursing, 23 per cent indicated intention of enrollment in a baccalaureate degree nursing major, and 20 per cent indicated plans to enroll in an associate degree nursing major program.

As noted in Table XLVIII, almost all (97 per cent) of the students planned to work following graduation. The students plans for further education are shown in Table XLIX. The data were treated with the chi square test, and in all three instances the distributions were not statistically different. This indicated that the interval prior to expected enrollment in another educational program was not different among the three groups.

The hypothesis tested was that the students in the three programs will differ in their subjective evaluation of the forces having the most influence on the selection of nursing as an occupation and in the selection of the particular program. The hypothesis was not supported in the case of the forces having the most influence upon the students toward selection of nursing as an occupation. The hypothesis was supported in the case of the students' reasons for program choice.

Information related to career choice is summarized by groups. Of the vocational nursing students 83 per cent were satisfied with their career choice and 69 per cent were satisfied with their program choice. Over one-half of the dissatisfied students would choose the associate degree program if they had a second choice. The majority of vocational students (87 per cent) did not enter the nursing program immediately after high school, yet 77 per cent of these students had been in the associate

TABLE XLVIII

NUMBER AND PERCENTAGE OF STUDENTS IN THE STUDENT COMPOSITE AND THE THREE NURSING PROGRAMS WHO PLAN TO WORK OR DO NOT PLAN TO WORK AS A NURSE FOLLOWING GRADUATION

Plan to Work as Nurse Following Graduation	Student Composite		Vocational Nursing Program		Associate Degree Nursing Program		Baccalaureate Degree Nursing Program	
	No.	%	No.	%	No.	%	No.	%
Plan to work	300	97	97	97	130	98	73	96
Plan not to work	7	2	2	2	2	1	3	3
Total	307	99	99	99	132	99	76	99

$\chi^2 = 1.325$        $df = 2$        $P < .001$



TABLE XLIX

TIME INTERVAL PRIOR TO EXPECTED ENROLLMENT IN ANOTHER EDUCATIONAL PROGRAM FOR STUDENTS  
IN THE STUDENT COMPOSITE AND IN EACH OF THE THREE NURSING PROGRAMS

Time Intervals	Student Composite		Vocational Nursing Program		Associate Degree Nursing Program		Baccalaureate Degree Nursing Program	
	No.	%	No.	%	No.	%	No.	%
Within a year of graduation	94	43	32	47	43	42	19	38
Within three years of graduation	54	24	17	25	18	17	19	38
Within five years of graduation	14	5	1	1	10	19	3	6
Within ten years of graduation	6	2	1	1	3	2	2	4
Indefinite	49	22	16	23	27	26	6	12
Total	217	97	67	97	101	96	49	98
		$\chi^2 = 14.661$		df = 8				NS

degree non-nursing curriculum prior to entry into the vocational nursing program. The objectives of the vocational nursing program are primarily to prepare a graduate to function at staff level nursing. The majority would choose this area for their first employment. For eventual employment, 40 per cent chose areas in advance of their preparation according to their program objectives. This may be in keeping with the two-thirds of this group that plan to enter the associate degree program. Almost one-half of those planning to continue school plan to do so within one year. Almost all plan to work after graduation.

Continuous upward mobility is seen as a pattern for this group. A progression in ability leading to advancement in educational programs is seen to exist, rather than an initial incorrect program choice for the majority of the vocational nursing students.

The associate degree group had the largest number satisfied with their career selection (93 per cent), while 85 per cent were satisfied with their program choice. Of the 14 per cent dissatisfied, almost one-half would choose baccalaureate degree nursing for the second time. Of the total group, if cost and distance were not a factor in choice, over one-half would choose a four or five year college program which seems to indicate the community college is supplying a need for those wanting a nursing career but unable to leave the area. Program objectives for the first position for this graduate are as a staff nurse, consequently three quarters of the group chose this area yet it only appeared to appeal to one-third of the group for eventual employment. Two-thirds of the total group plan to

continue school at the baccalaureate nursing level, and one-quarter plan to continue at the master degree level in nursing. Observing the satisfaction with the program and future plans, this group has a smaller number of dissatisfied students than the vocational nursing group, yet also appears to show a continuing pattern of upward mobility.

Of the baccalaureate degree nursing students, a smaller number are satisfied with their career choice (89 per cent) than with the program choice (98 per cent), this combined with cost and distance not being a factor in career choice indicates interest in the baccalaureate level education as being important to this group. Employment is in keeping with the program objectives for the baccalaureate degree nurse, as 83 per cent plan to begin as a staff nurse, yet eventual employment planned at this level is only 5 per cent. Ninety-six per cent plan to continue school, 63 per cent at the masters level nursing program, which shows continued upward mobility. Only one-third plan to continue school within one year of graduation indicating students may be following the recommendation that the nurse from the baccalaureate school receives the most meaningful graduate level experience following one year of employment in the nursing field.

Hypothesis III: Students in the three programs and community college counselors for these three programs will not agree in their perception of program characteristics of the vocational, associate degree, and baccalaureate degree nursing as defined by a nursing model in regard to cost, length of educational time, difficulty of prerequisite subjects, and difficulty of curriculum.

The hypothesis is supported by the data, with a value which is significant well beyond the .05 level of confidence.

Statistical data were run by the Control Data Corporation (CDC) 6400 computer at the University of California, Berkeley, California, by the Kruskal-Wallis H-test, one-way analysis of variance by ranks. Since the Kruskal-Wallis H-test indicates that a difference exists but does not distinguish where the difference lies, post hoc comparisons based on a chi square analogue of Scheffé's multiple comparisons were used to distinguish differences between groups.<sup>6</sup>

Items 4, 5, 13, 15, 19, 21, 22, 24, 26, 31, 32 and 34 on "Comparing Vocations Questionnaire," comprise the hypothesis model. Ranks were assigned to each of the three questionnaire responses, with the correct response having the highest ranking, and the intermediate response having the middle ranking, and the least appropriate response having the lowest ranking.

The mean rank was obtained for each of the four groups, as shown in Table L.  $P$  (Chi square greater than  $H$ ) = .00008 supported the hypothesis that student bodies in the three programs and counselors will not agree in their perception of characteristics of vocational nursing, associate degree nursing, and baccalaureate degree nursing related to a nursing model in regard to cost, length of educational time, difficulty of prerequisite subjects, and difficulty of curriculum.

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<sup>6</sup>William C. Guenther, Analysis of Variance (New Jersey: Prentice-Hall, Inc., 1964), p. 57.

TABLE I

KRUSKAL-WALLIS ONE-WAY ANALYSIS OF VARIANCE BY RANKS OF FOUR GROUPS PERTAINING TO PERCEPTION OF CHARACTERISTICS OF NURSING PROGRAMS IN RELATION TO A NURSING MODEL

MEAN RANKS OF GROUPS	
Groups	
Counselors (N=38)	162.28
Vocational Nursing Students (N=99)	164.29
Associate Degree Nursing Students (N=132)	148.97
Baccalaureate Degree Nursing Students (N=76)	214.92
Mean rank	
P (Chi Square greater than H) = .00008	H = 21.485
	df = 3
	P < .05

Table LI shows the post hoc comparison of mean ranks for the four groups pertaining to perceptions of characteristics of nursing programs in relation to a nursing model. In relation to the model, the baccalaureate degree nursing students were significantly closer than either the vocational nursing students, or the associate degree nursing students. The counselors were significantly closer to the model than the associate degree students. There was a lack of significance between the associate degree students and the vocational students, between the baccalaureate degree students and the counselors, and between the vocational students and the counselors. This indicated that the baccalaureate students were more in agreement with the stated characteristics of the nursing programs than the vocational students, or the associate degree students. The vocational students and the associate degree students were not as knowledgeable about the nursing program characteristics. The counselor group was more knowledgeable than the associate degree students related to the model characteristics of the nursing programs.

Hypothesis IV: Students in the three programs and community college counselors for these three programs will not agree in their perception of the functions of the graduates of the vocational, associate degree, and baccalaureate degree nursing programs as defined by a model, in regard to type of nursing care given, principle location of the nursing care rendered, level of administration by the nurse, eligibility for licensing, route for advancement and title used in referring to this graduate.

TABLE LI

POST HOC COMPARISONS OF MEAN RANKS FOR FOUR GROUPS PERTAINING TO PERCEPTIONS OF CHARACTERISTICS OF NURSING PROGRAMS IN RELATION TO A NURSING MODEL

CONTRAST	VALUE	DIFFERENCE	CRITICAL VALUE	SIGNIFICANCE
$\bar{X}_{BDN} - \bar{X}_{VN}$	214.92-164.29	50.63	42.93	$P < .05$
$\bar{X}_{BDN} - \bar{X}_{ADN}$	214.92-148.97	65.95	40.71	$P < .05$
$\bar{X}_{Counselors} - \bar{X}_{ADN}$	162.28-148.97	13.31	11.96	$P < .05$
$\bar{X}_{VN} - \bar{X}_{ADN}$	164.29-148.97	15.32	35.90	NS
$\bar{X}_{BDN} - \bar{X}_{Counselors}$	214.92-162.28	52.64	55.02	NS
$\bar{X}_{VN} - \bar{X}_{Counselors}$	164.29-162.28	2.01	51.45	NS

## GROUPS

VN | = vocational students  
 ADN = associate degree students  
 BDN = baccalaureate degree students

The hypothesis is supported by the data, with a value which is significant beyond the .05 level of confidence. Statistical data were run by the Control Data Corporation (CDC) 6400 computer at the University of California, Berkeley, California, by the Kruskal-Wallis H-test, with one-way analysis of variance by ranks. Scheffé's post hoc comparisons were used to distinguish differences between groups.

Items 2, 6, 7, 9, 11, 12, 16, 18, 20, 23, 25, 27, 28, 29, 30, 33 and 35 on "Comparing Vocations Questionnaire," comprise the hypothesis model. Ranks were assigned to each of the three questionnaire responses, with the correct response having the highest ranking, the intermediate response having the middle ranking, and the least appropriate response having the lowest ranking. Table LII shows the mean rank obtained for each of the four groups.  $P$  (Chi square greater than  $H$ ) = .00379 supported the hypothesis.

Table LIII shows the post hoc comparisons of mean ranks for the four groups pertaining to perception of functioning of graduates in relation to a nursing model. A significant difference was shown between the vocational students and the associate degree students, with the associate degree students being closer to the model. A significant difference was shown between the associate degree students and the counselors, with the associate degree students being closer to the model. There was a lack of significance between the baccalaureate degree students and the vocational students, between the baccalaureate degree students and the associate degree students, between the baccalaureate degree students and the counselors,



TABLE LII

KRUSKAL-WALLIS ONE-WAY ANALYSIS OF VARIANCE BY RANKS OF FOUR GROUPS PERTAINING TO PERCEPTION OF FUNCTIONING OF GRADUATES IN RELATION TO A NURSING MODEL

MEAN RANKS OF GROUPS				
Groups	Counselors (N=38)	Vocational Nursing Students (N=99)	Associate Degree Nursing Students (N=132)	Baccalaureate Degree Nursing Students (N=76)
Mean rank	146.24	146.32	189.30	170.46
P (Chi Square greater than H) = .00379    H = 13.432    df = 3				P < .05

TABLE LIII

POST HOC COMPARISONS OF MEAN RANKS FOR FOUR GROUPS PERTAINING TO PERCEPTION  
OF FUNCTIONING OF GRADUATES IN RELATION TO A NURSING MODEL

CONTRAST	VALUE	DIFFERENCE	CRITICAL VALUE	SIGNIFICANCE
$\bar{X}_{ADN} - \bar{X}_{VN}$	189.30-146.32	42.98	35.90	$P < .05$
$\bar{X}_{ADN} - \bar{X}_{Counselors}$	189.30-146.24	43.06	11.96	$P < .05$
$\bar{X}_{BDN} - \bar{X}_{Counselors}$	170.46-146.24	24.22	55.02	NS
$\bar{X}_{BDN} - \bar{X}_{VN}$	170.46-146.32	24.14	42.93	NS
$\bar{X}_{ADN} - \bar{X}_{BDN}$	189.30-170.46	18.84	40.71	NS
$\bar{X}_{VN} - \bar{X}_{Counselors}$	146.32-146.24	.08	51.45	NS

Groups

VN = vocational students

ADN = associate degree students

BDN = baccalaureate degree students

and between the vocational students and the counselors. This indicated that the associate degree students perceived the functioning of nursing graduates more in relation to the established model than did the counselors or the vocational students.

Items 1, 3, 8, 10, and 14 on the "Comparing Vocations Questionnaire," were of a subjective nature and had the purpose of obtaining an expression of favorableness of attitudes toward vocations for the vocational, associate degree and baccalaureate degree nursing vocations. Ranks were assigned with the vocational nurse highest, associate degree nurse next, and the baccalaureate degree nurse lowest in rank. The Friedman Rank Test was used as preliminary to preparation for the Kruskal-Wallis H-test, with one-way analysis of variance by ranks. Mean ranks are shown in Table LIV, differences were not noted on questions other than item 14. The response: "involves the largest number of pleasant tasks," was unanimously chosen by all groups; counselors, vocational students, associate degree students, and baccalaureate degree students, as being a phrase most true of the vocational nurse role.

No significant differences were found between the four groups, in the mean ranks of the subjective questions, as shown in Table LV.

### Interviews

The following presentation is made of data obtained from interviews. These interviews were used as a supplementary exploration of specific questions in depth, and also as an external criterion to aid in evaluating questionnaire validity.

TABLE LIV

FRIEDMAN RANK TEST MEAN RANK ON FAVORABLENESS OF VOCATIONAL,  
ASSOCIATE DEGREE OR BACCALAUREATE DEGREE NURSING  
FOR ALL GROUPS

Item No.	Mean Rank
1 Provides the greatest amount of personal satisfaction.	2.52
3 Gives one the greatest amount of prestige.	2.52
8 Requires the greatest amount of intelligence.	2.52
10 Is the most highly respected by the public.	2.52
14 Involves the largest number of pleasant tasks	4.90
P(Chi-square greater than CHIRSQ) = CHIRSQ = 607.53      df = 4	
Rank correlation ratio = .673      P < .001	

TABLE LV

KRUSKAL-WALLIS ONE-WAY ANALYSIS OF VARIANCE BY RANKS OF SUBJECTIVE  
 QUESTIONS ON FAVORABLENESS OF VOCATIONAL, ASSOCIATE DEGREE  
 OR BACCALAUREATE DEGREE NURSING BETWEEN FOUR GROUPS

MEAN RANKS OF GROUPS				
Groups	Counselors (N=38)	Vocational Nursing Students (N=99)	Associate Degree Nursing Students (N=132)	Baccalaureate Degree Nursing Students (N=76)
Mean rank	170.07	169.59	171.49	157.44
P (Chi square greater than H) = .26515    H = 3.963    df = 3    NS				

An analysis of data gathered in personal interviews was made.

A total of forty-nine interviews was made with five counselors from each of the three community colleges, five vocational nursing students from each of the three community colleges, five associate degree students from each of the three community colleges, and four nursing administrators of the vocational and associate degree programs in the three community colleges.

After the obtaining of responses to the questions listed on the interview inventory, and prior to asking the respondent if there was anything he wanted to add, he was asked, "Do you feel you were able to answer the questionnaire you took in an honest manner?" This referred to the anonymous questionnaire--either the student or counselor form--previously completed by the respondent. All but one subject stated that honest answers had been given. This one subject, a counselor, stated: "I just wrote in something, like I do on all these questionnaires."

Data obtained from personal interviews were coded into the three categories into which the responses tended to cluster: "ability", "interest", and "investment". "Ability" included both meeting prerequisite program requirements and statements related to student self-confidence in their ability. "Interest" included such responses as desire to work closely with the patient, to supervise, function as a public health nurse, achievement of greater financial gains, obtaining of prestige, and greater knowledge. "Investment" encompassed responses related to the length of time, distance to travel, and financial investment the student was either able or willing to give.

Each student was asked if she was in the nursing program of her choice and if not what she would have preferred. Each was also asked about any intention to change programs. Ten vocational students, and ten associate degree students indicated that they were in the program of their choice, and five students from each of these programs would have initially preferred another program. Four of the vocational students stated they would have entered the associate degree program but lacked prerequisite courses, specifically chemistry and algebra. These four vocational students believed the gain in knowledge and confidence obtained during the vocational nursing program would aid them in entering and completing the associate degree nursing program. The other vocational student mentioned family and children responsibilities as preventing her entrance into a baccalaureate nursing program. Although ten vocational students talked at length of their great satisfaction at being a bedside nurse, they also spoke of future plans to advance to the associate degree program to become supervisors which would be positions away from the bedside of the patient.

Five associate degree students who would have preferred a baccalaureate degree program indicated that distance, family responsibilities and the time involved prevented this program choice. All but one of the five associate students spoke of either planning or considering the idea of continuing their education.

In reply to the question "In your opinion, what is the reason a student chooses vocational nursing?" four vocational students said it was a lack of ability. Ten vocational students stated the reason was interest, and one indicated the shorter investment of time was the reason. To this

same question associate degree students and counselors were in agreement in the following ways. Ten associate degree students and ten counselors said lack of ability, three of each group said interest, and two of each group answered the time and money investment caused the vocational program to be more attractive. The ten counselors that answered lack of ability specified that lack of confidence in attempting the prerequisite subjects required for the associate degree program was a major factor. The nursing program administrators viewed lack of ability, and the lack of qualifications to enter the associate degree program as being the chief factors in choice of this program. All groups appeared to view the students' assessment of her capabilities as the major factor as to whether she was capable of mastering a certain curriculum.

For the question "In your opinion, what is the reason a student chooses associate degree nursing", six vocational students said the student was interested in being a supervisor, and nine vocational students said the choice was because it was the shortest time in which one could become a registered nurse. Five of the associate degree students indicated interest in being a registered nurse. Ten said the short time investment was a major factor in choice. Four counselors indicated the student had ability to pursue this program, four counselors chose interest, and seven said investment of a short time to become a registered nurse was the chief reason for the choice. The four nursing administrators said the short time investment was a major factor.



The groups were asked "In your opinion, what is the reason a student chooses baccalaureate degree nursing?" One vocational student answered that the student has the ability, thirteen vocational students said to gain prestige, and one responded investment, indicating this would be a young student who had a lot of time and financial means. All fifteen associate degree students said the reason would be prestige. Six counselors answered that the student has ability to pursue higher education, while nine said this choice was because of the prestige associated with a degree. Four of these counselors mentioned they could tell when a student entered the office if she would be satisfied in vocational nursing or baccalaureate degree nursing by her appearance, and speech. The four nursing administrators agreed the student wanted a career and was more interested in academic achievement than work oriented. Overall, the majority viewed the prestige of a baccalaureate degree as being the major factor in this choice, with a smaller number seeing ability as a factor. All groups appeared to be responding more to the educational level of the general academic program than to the specific nursing occupational program. Several of the vocational students and associate degree students mentioned if they had a child entering nursing that they would encourage her to obtain a baccalaureate degree.

"Why does a student enter vocational nursing, then later enter the associate degree nursing, rather than originally entering associate degree nursing?" was answered by all fifteen vocational students as being a gain in confidence in their ability after being successful in the vocational nursing program. Nine of the associate degree students agreed with this

statement. Two associate degree students and six counselors said interest was the reason, that specifically the student continued on educationally to fulfill herself. Four associate degree students said interest in increasing status was the reason. Nine counselors said the vocational nursing student entering associate degree nursing had gained confidence and gained in ability to achieve in the program. All four nursing administrators said a gain in confidence, coupled with more experience, led the student to believe she could be successful in the associate degree nursing program.

"Why does a student enter associate degree nursing, then later enter the baccalaureate degree nursing, rather than originally entering baccalaureate degree nursing?" was asked. Four vocational students said that after completing the associate degree program the students would know they had the ability for the baccalaureate degree program. The other responses were in the area of interest: four said to gain prestige, three said to make more money, and four said for purposes of self-fulfillment. Ten associate degree students answered that the student gains confidence in her ability, likes the nursing field, and wants to go on. Four associate degree students responded that an interest in public health nursing was the reason, and one said to make more money. Six counselors responded that the student learned of other fields after she was in the nursing program, six said to develop her potential, one said the student learned that she had made a mistake, and two said they could make this financial investment after they had worked a while. One of the nursing administrators said the student possibly had been rejected initially by the baccalaureate program, and was now attempting to enter her area of initial

choice, two said that the student may not initially have known of other fields for which the baccalaureate degree was a requirement. The other nursing administrator said the chief reason was the financial investment, and either after working awhile, or by having the registered nurse title, the student was eligible for loans which would allow a continuation of her education.

The interviews were surprising in that almost every subject discussed the students' appraisal of her own confidence, or lack of confidence, as being a chief factor in program selection, or in advancement to another program.

The nursing administrators were interviewed to secure information about recruitment and selection of students. A recruitment need was not seen to exist at any of the three community colleges, as each administrator stated there was a long waiting list of applicants. The high school counselor was not seen as helping with recruitment, however, he was furnished information from the colleges about the nursing programs. At all of the colleges the counseling department referred students to the nursing departments for career information, however, at one of the colleges a specific counselor was assigned to interview prospective applicants, and counsel nursing students. All colleges had an Admissions Committee for each program that participated in final student selection.

Interview results showed the respondents gave honest answers to the questionnaires previously given, with one exception. Responses obtained on career choice appeared to cluster into the three areas of "ability", "interest" and "investment". Individual students spoke of

future plans to progress upward in the nursing education field. Mention was not made that the vocational and associate degree nursing programs were terminal. Most frequent discussion about upward mobility revolved around the students' feeling of confidence in her ability.

### SUMMARY

This chapter has presented data analyzed using non-parametric techniques obtained from three instruments: student questionnaire, counselor questionnaire, and Comparing Vocations Questionnaire. Interview schedule results were discussed.

The hypotheses were tested for differences among the students in the three programs in age, educational level of the father, family income, standing in high school graduating class, in the forces having the most influence toward selecting nursing as an occupation, and in reasons for program choice. A chi square comparison was made supporting all the hypotheses with the exception of those forces having the most influence upon the students' selection of nursing as an occupation.

In analyzing the data obtained with the Comparing Vocations Questionnaire, the researcher, with the aid of the Control Data Corporation Computer, considered the data by the one way analysis of variance design, and the Scheffé multiple post hoc comparisons. Differences were distinguishable between the groups and the model pertaining to perception of characteristics of the nursing programs, with the baccalaureate degree students closer to the model than the vocational students and associate

degree students. The counselor group was closer to the model than the associate degree students. Perceptions of all the groups in relation to a model of the functioning of program graduates were obtained. The associate degree students were closer to a model than the counselor group and the vocational student group. Subjective questions related to favorableness of vocational nursing, associate degree nursing, and baccalaureate degree nursing showed only one statistically important finding: all four participating groups choose the response that vocational nursing was the vocation involving the greatest number of pleasant tasks.

Also presented in this chapter, according to frequency of response, were data obtained by the interview method. The findings were supplemental, with the major finding being the degree to which the students' feeling of confidence affected her career choice. Career choice appeared not to be related to the nursing field as an entity, but to the educational level of vocational or professional preparation.

The last chapter of this report will present the summary, and conclusions based upon the investigation. Also presented will be the recommendations for further research in the areas related to this research.

## CHAPTER V

### SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The purpose of the following section of this report is to present a condensed statement of the problem followed by the conclusion, and recommendations for further study.

#### Statement of the Problem

The problem under investigation in this study was to determine whether (1) community college counselors, (2) vocational nursing students, (3) associate degree nursing students, and (4) baccalaureate degree nursing students differ in their perceptions of (a) reasons for student selection of nursing and for choice of different programs, and (b) whether the above groups differ in perception of functioning of the graduates of different programs, as related to (c) a model of these positions.

#### Methodology

This study compared the perceptions of four groups; counselors, associate degree nursing students, and vocational nursing students in three randomly selected community colleges and baccalaureate degree nursing students in two randomly selected universities, as defined by a model. Statistical measures were made and the hypotheses that any differences between the measures for the groups could arise by chance was tested. The basic data used in the study were collected by administering questionnaires to each subject. In addition, interview data from counselors, students, and administrators of nursing programs, to determine influences effecting

the students' vocational program choice were elicited. The respondents in each major category numbered counselors, thirty-eight; vocational students, ninety-nine; associate degree students, one hundred and thirty two; and baccalaureate degree nursing students, seventy-six.

To prove the stated hypotheses, a model was constructed of the characteristics of the different nursing programs and a model made of the different nursing functions in accordance with the stated position of the American Nursing Association, and the California League for Nursing. This analog model was constructed from these nursing organizational statements and from legal standards, describing the differences in educational programs, as well as the proposed functioning upon graduation of the vocational nursing, associate degree nursing, and baccalaureate degree nursing graduate.

The current study has answered certain questions about perception of four groups in student selection of nursing programs and choice and functioning of program graduates as related to a nursing model. The perception of community college counselors, vocational nursing students, associate degree nursing students and baccalaureate degree nursing students, were different, as related to a nursing model. Career choice information does not appear completely clear to students and counselors. To expedite student selection of careers, more systematic methods of disseminating clear and comprehensive information to those working with prospective students of nursing is indicated.

Various conclusions and recommendations were drawn from this study in terms relative to the hypotheses and limitations stated in Chapter I of this report.

## II. CONCLUSIONS

The following are the conclusions from this study related to each hypothesis of this study:

1. Students in the three programs will differ in age, educational level of father, family income, and standing in high school graduating class.

The data from this study clearly support this hypothesis, the chi square values are significant beyond the .05 level. The vocational nursing student body was the older group. The baccalaureate group was the younger, while the associate degree group was closer in age to that of the vocational student group. The vocational student group had fathers with the least amount of education. Furthermore one-third of this group had family incomes of less than \$6,000 annually. Slightly over one-half of the baccalaureate degree group also had fathers who had completed college, and this group had the greatest percentage with higher family income. The associate degree group appeared to be the most heterogeneous, ranging from higher educational levels for the fathers to those with the lowest levels. This range was seen in high school graduating class rank as forty per cent of the graduates were in the top quarter, and 9 per cent were in the bottom quarter. The baccalaureate group did not have any students listed in the bottom quarter of the high school graduating class. The vocational student group had some non-high school graduates. This group also had the largest number of students that had been in the bottom half of their high school graduating class.

2. Students in the three programs will differ in their subject-



tive evaluation of the forces having the most influence on the selection of nursing as an occupation, and in the selection of the particular program.

The hypothesis was not supported in the case of the forces having the most influence upon the students toward selection of nursing as an occupation. Counselors viewed the high school and college counselors as being a more important influence upon the student's career choice than did the students, who viewed the counselor's influence as minimal. Major influence upon her in her choice of nursing as a career was identified by the majority of the students as being her own decision.

The hypothesis was supported in the case of the students' reasons for program choice with treatment of the data by the chi square test in which values were significant above the .05 level. From five responses listed as reasons for program choice, the students were asked to rate influences as first, second and third in importance in selecting the type of program in which they were presently enrolled. Each individual could choose one of the five responses one time only. The vocational students chose, in rank order from most to least the three reasons for program choice (1) "type of program best prepares me for what I want to do," (2) "cost of program best suited my financial resources," and (3) "I could meet the admission requirements." The associate degree students ranked the three reasons from most to least important as, (1) "cost of program best suited my financial resources," (2) "type of program which best prepares me for what I want to do," and (3) "cost of program best suited my financial resources." The baccalaureate degree students ranked the

three reasons according to first, second and third choice as (1) "type of program best prepares me for what I want to do," (2) "opportunity for a college experience," and (3) "opportunity to earn college credit."

The baccalaureate degree student appeared more interested in the college opportunity than did the vocational student or the associate degree student. The vocational student seemed concerned with meeting the admission requirements and the cost of the program, while the associate degree student was concerned with the program cost. The vocational student and the baccalaureate degree student both had as their first concern the program objective in accordance with what they wanted to do. Data obtained by the interview method indicated to what degree the subject's confidence affected career choice. Career choice appeared not to be related to the nursing field as an entity, but to the level of vocational or career preparation. An example would be the associate degree student limited by distance, cost, or family responsibilities from obtaining the baccalaureate degree.

Students and community college counselors in the three programs will not agree in their perceptions of characteristics of nursing programs related to a nursing model in regard to cost, length of educational time, difficulty of prerequisite subjects and difficulty of curriculum.

This statement is supported by the data which showed that these differences were significant beyond the .05 level. In relation to the model, the baccalaureate degree nursing students were significantly closer than the associate degree students or the vocational students, and the counselors closer than the associate degree students. There was a lack of

significance between the associate degree students and the vocational students. No significant difference was found between the baccalaureate degree students and the counselors, or between the vocational students and the counselors. The baccalaureate degree students were more in agreement with the stated characteristics of the three nursing programs than the vocational students and the associate degree students. The counselor group was more knowledgeable than the associate degree students about the characteristics of the three nursing programs.

4. Students and community college counselors in the three programs will not agree in their perceptions of the functions of the graduates of nursing programs related to a nursing model, in regard to type of nursing care rendered, principle location of the nursing care given, level of administration by the nurse, eligibility for licensing, route for advancement, and title used in referring to this graduate.

The statement is supported by the data, which showed that these differences were significant beyond the .05 level. A significant difference was shown between the vocational students and associate degree students, with the associate degree students being closer to the model. A significant difference was shown between the associate degree students and the counselors, with the associate degree students being closer to the model. There was a lack of significance between the baccalaureate degree students and the associate degree students, between the baccalaureate degree students and the counselors, and between the vocational students and the counselors.

The associate degree students perceived the functioning of the nursing graduate more in relation to the established American Nursing Association and California League for Nursing position, than did the counselors or the vocational students.

### III. RECOMMENDATIONS FOR FURTHER STUDY

Recommendations for further action on the basis of this study are as follows:

- (1) Study the value of different orientation approaches concerning the characteristics of nursing programs and the role of the graduates of the different nursing programs.
- (2) Study of existing types of information about the different nursing programs being disseminated to prospective students and counselors, particularly within the community college.
- (3) Favorable consideration should be given by nursing educators to methods of providing within nursing education programs a continuum more conducive to efficient upward mobility.
- (4) Study should be made of the degree of self-confidence expressed by the student, and its relationship to her nursing program selection.
- (5) Determine if greater dissemination of nursing program information would aid the community college counselor, or if his need for nursing information is no greater than for any other occupational field.

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APPENDIXES

APPENDIX A

## APPENDIX A

## LETTER OF TRANSMITTAL TO UNIVERSITY STUDENTS

January 23, 1970

Dear Miss :

This is a busy time of the year, and you are probably knee-deep in work. However, would you please fill out the enclosed questionnaire pertaining to the vocational roles of levels of nurses. Preliminary studies have shown that it takes less than twenty minutes to fill it out effectively. A stamped, addressed envelope is enclosed for your convenience.

The purpose of the study is to obtain perceptions as related to the American Nursing Associations' position on nursing education from students and counselors in various college level institutions; which might provide guidelines for helping make this determination about levels, and also lead to action.

This study is being conducted under the direction of Dr. M. Dale Arvey, Dr. Cedric W. Dempsey, Dr. W. Preston Gleason, Dean J. Marc Jantzen, and Dr. Helmut H. Riemer, of the University of the Pacific.

All of the other groups that were randomly selected are having these questionnaires administered in a classroom group or staff meeting, and full response will be obtained. I plead with you to participate in order that complete class response related to the position paper is obtained. As an alumni of the University of California Medical Center, I believe your response related to the position paper is vital. I would be most pleased if you would fill out and return the questionnaire immediately following this reading.

Thank you very much.

Very sincerely,

MARCY PAYNE, R.N.  
Instructor, Health Sciences  
San Joaquin Delta College  
Stockton, California 95207

MP/bc

Encl.: 1

APPENDIX B

## APPENDIX B

## FOLLOW-UP LETTER TO UNIVERSITY STUDENTS

February 12, 1970

Dear Miss :

Recently I sent you a questionnaire concerning your perception of the roles of levels of nursing. Your questionnaire has not yet been returned, perhaps due to some error or oversight it was overlooked.

I am particularly anxious to obtain a sufficient percentage of response from your class at the University of California Medical Center. As future leaders in nursing, chiefly responsible for establishing policy in nursing fields, your perception of the occupational differences in roles is extremely important, and I would like a significant number of returns to show your perception. The other ten groups surveyed have returned all questionnaires.

If you could complete your questionnaire and drop it in the mail to me, I would be grateful. If by any chance, you have misplaced the questionnaire and need another, will you please so indicate on the margin of this letter and send it back to me. If you do not wish to fill out the questionnaire, will you please mention this on the bottom of this letter and mail it back to me.

Sincerely,

MARCY PAYNE  
Instructor, Health Sciences Division  
San Joaquin Delta College  
Stockton, California

Return to:  
Miss Marcy Payne  
Research Project  
2108 Lucille Avenue  
Stockton, California, 95207

APPENDIX C



## INTERVIEW INSTRUMENT

ADMINISTRATOR OF COMMUNITY COLLEGE SCHOOL OF NURSINGI. STUDENT CHOICE:

- (1) Chief reason student chooses Vocational Nursing: \_\_\_\_\_.
- (2) Chief reason student chooses Associate Degree Nursing: \_\_\_\_\_.
- (3) Chief reason student chooses Baccalaureate Degree Nursing: \_\_\_\_\_.
- (4) The reason a VN enters ADN program instead of entering the ADN program initially \_\_\_\_\_.
- (5) The reason an ADN enters BDN program instead of entering the BDN program initially \_\_\_\_\_.

II. COUNSELING PRACTICES AT THIS SCHOOL:

- (1) Counseling department:
- |  |     |      |      |
|--|-----|------|------|
|  | VN: | ADN: | BDN: |
|--|-----|------|------|
- (2) Nursing department:
- |  |     |      |      |
|--|-----|------|------|
|  | VN: | ADN: | BDN: |
|--|-----|------|------|

III. RECRUITMENT POLICIES:

- (1) Is there a need?
- (2) If so, how? Literature, lectures, hospital visits, career days
- (3) Is this by request \_\_\_\_\_, or is initiative taken by college \_\_\_\_\_.
- (4) How much does the high school counselor help with recruitment? How?
- VN:
- ADN:

IV. SELECTION PROCEDURES:

- For the past class entering, estimate by percentages.
- |                                                       |     |      |
|-------------------------------------------------------|-----|------|
| (1) Number of inquiries received concerning entrance: | VN: | ADN: |
| (2) Number of official applications:                  | VN: | ADN: |
| (3) Number of applicants accepted by school:          | VN: | ADN: |
| (4) Number of applicants rejected by school:          | VN: | ADN: |
| (5) Reasons for rejection by category:                |     |      |
| (a) Academic:                                         | VN: | ADN: |
| (b) Health:                                           | VN: | ADN: |
| (c) "Personality?":                                   | VN: | ADN: |
| (d) Other:                                            | VN: | ADN: |

- (6) To whom does the applicant apply at this college? VN:  
ADN:
- (7) Who considers the application: VN:  
ADN:
- (8) If there is an admissions committee, number of members and titles  
VN:

ADN:

Is the Director of Nursing on this Committee \_\_\_? Does she have veto power \_\_\_? Who is most closely involved with interviewing and selection \_\_\_\_\_?

Is a meeting held to select all applicants \_\_\_ or for those cases where lack of agreement exists?

V. CRITERIA FOR EVALUATION OF APPLICANTS:

(1) Are there certain characteristics such as: (a) academic performance, (b) health, and (c) "personality"?

(a) Academic performance: Apart from legal minimal standards are there others?  
What criteria for rejection?

VN:

ADN:

(b) Health: What criteria for rejection?

VN:

ADN:

(c) "Personality": What criteria for rejection?

VN:

ADN:

VI. RESULTS OF SELECTION PROCEDURES:

(1) Number of applicants rejected in relation to those admitted.

VN:

ADN:

(2) Number of applicants admitted below the established standards. (identify criteria that applicant is below).

VN:

ADN:

VII. OPINIONS BY DIRECTORS

(1) In your opinion does the nursing profession feel a need for raising standards of admission, or of lowering standards of admission?

VN:

ADN:

- (2) Are there any expected actions by this school related to either raising or lowering admission standards?

VN:

ADN:

- (3) To give an overall evaluation of the quality of the students who were admitted to this school under the existing selection procedure would you indicate the proportion of students who have been accepted who the director wishes had not been accepted based upon their subsequence performance in this school (estimate percentage of total).

VN:

ADN:

APPENDIX D

## COUNSELOR QUESTIONNAIRE

1. Identification Number \_\_\_\_\_  
(Leave blank)
2. Name of College \_\_\_\_\_  
(Leave blank)
3. Presently counseling: A \_\_\_\_\_ Full-time  
B \_\_\_\_\_ Part-time
4. Sex: A \_\_\_\_\_ Male  
B \_\_\_\_\_ Female

MOST OF THE QUESTIONS CAN BE ANSWERED BY MAKING AN ENTRY IN THE APPROPRIATE SPACE. PLEASE ANSWER ALL QUESTIONS TO THE BEST OF YOUR ABILITY.

---

5. Into which of the following age groups do you fall?  
A \_\_\_\_\_ 20 to 30  
B \_\_\_\_\_ 31 to 40  
C \_\_\_\_\_ 41 or older.

For questions 6 up to 20, in your judgment, the most influential factor in student choice of these occupations as a career was: (Place an A in front of the category indicating the most influence, a B in front of the category second in influence and a C in front of the category third in influence.)

## Choice of VOCATIONAL NURSING:

6. \_\_\_\_\_ Close family members
7. \_\_\_\_\_ High school counselor
8. \_\_\_\_\_ Friends who are nurses or nursing students
9. \_\_\_\_\_ Community college counselor
10. \_\_\_\_\_ Other which is not listed

## Choice of ASSOCIATE DEGREE NURSING:

11. \_\_\_\_\_ Close family members
12. \_\_\_\_\_ High school counselor
13. \_\_\_\_\_ Friends who are nurses or nursing students
14. \_\_\_\_\_ Community college counselor
15. \_\_\_\_\_ Other which is not listed

## Choice of BACCALAUREATE DEGREE NURSING:

16. \_\_\_\_\_ Close family members
17. \_\_\_\_\_ High school counselor
18. \_\_\_\_\_ Friends who are nurses or nursing students
19. \_\_\_\_\_ Community college counselor
20. \_\_\_\_\_ Other which is not listed

Of these factors, in your judgment, what three reasons were most important in the selection of the occupational program (i.e. vocational nursing, associate degree nursing, or transfer baccalaureate program in nursing) in which these students are now enrolled. (Please mark A before the reason most important, Mark B before the reason second in importance, and mark C before the reason third in importance.)

STUDENTS IN VOCATIONAL NURSING PROGRAM:

21. \_\_\_\_\_ Cost of program best suited student's financial resources.
22. \_\_\_\_\_ Type of program which best prepares student for what she wanted to do.
23. \_\_\_\_\_ Opportunity for a college experience.
24. \_\_\_\_\_ Opportunity to earn credit toward a college degree or certificate.
25. \_\_\_\_\_ Student could meet the admission requirements.

STUDENTS IN ASSOCIATE DEGREE PROGRAM:

26. \_\_\_\_\_ Cost of program best suited student's financial resources.
27. \_\_\_\_\_ Type of program which best prepares student for what she wanted to do.
28. \_\_\_\_\_ Opportunity for a college experience.
29. \_\_\_\_\_ Opportunity to earn credit toward a college degree or certificate.
30. \_\_\_\_\_ Student could meet the admission requirements.

STUDENTS IN BACCALAUREATE DEGREE NURSING PROGRAM:

31. \_\_\_\_\_ Cost of program best suited student's financial resources.
32. \_\_\_\_\_ Type of program which best prepares student for what she wanted to do.
33. \_\_\_\_\_ Opportunity for a college experience.
34. \_\_\_\_\_ Opportunity to earn credit toward a college degree or certificate.
35. \_\_\_\_\_ Student could meet the admission requirements.

APPENDIX E

## STUDENT QUESTIONNAIRE

1. Identification Number \_\_\_\_\_  
(Leave blank)
2. Name of College \_\_\_\_\_  
(Leave blank)
3. Program in Nursing: A \_\_\_\_\_ Associate Degree Nursing  
B \_\_\_\_\_ Vocational Nursing  
C \_\_\_\_\_ Baccalaureate Degree Nursing
4. Semester in this School:  
A \_\_\_\_\_ First  
B \_\_\_\_\_ Second  
C \_\_\_\_\_ Third  
D \_\_\_\_\_ Fourth  
E \_\_\_\_\_ More than fourth
5. Sex: A \_\_\_\_\_ Male  
B \_\_\_\_\_ Female

This is not a test and there are no right or wrong answers. The questions can be answered by making a mark in the appropriate space. Please follow the instructions and answer all questions to the best of your ability. All information on individuals will be held in strict confidence and will in no way influence your standing or your progress in your school.

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6. What are the number of hours per week you work for self-support?  
A \_\_\_\_\_ 16 hours or less  
B \_\_\_\_\_ 16 to 30  
C \_\_\_\_\_ 30 hours or more
7. Into which of the following age groups do you fall?  
A \_\_\_\_\_ 29 or under  
B \_\_\_\_\_ 39 or under  
C \_\_\_\_\_ 49 or under  
D \_\_\_\_\_ 50 and above
8. What is your race:  
A \_\_\_\_\_ Negro  
B \_\_\_\_\_ White  
C \_\_\_\_\_ Oriental  
D \_\_\_\_\_ Mexican-American  
E \_\_\_\_\_ Other
9. What is your marital status?  
A \_\_\_\_\_ Single  
B \_\_\_\_\_ Married  
C \_\_\_\_\_ Divorced, separated or widowed



10. Do you have children:  
A  Yes  
B  No
11. Number of children:  
A  None  
B  One  
C  Two  
D  Three  
E  Four or more
12. Are you a high school graduate?  
A  Yes  
B  No
13. What was the last grade you completed?  
A  8th grade or less  
B  9th  
C  10th  
D  11th  
E  completed 12th grade
14. Which one of these phrases most nearly describes the school from which you graduated?  
A  Large public school (1,000 and more students)  
B  Small public school (fewer than 1,000 students)  
C  Private school
15. To the best of your knowledge, what was your academic rank in your high school graduating class?  
A  Top quarter  
B  Top half  
C  Bottom half
16. Which of the following courses or areas of study did you enjoy the most in high school?  
A  Science courses  
B  Mathematics courses  
C  English courses  
D  Physical education courses  
E  Others which are not listed
17. Did you enter this school of nursing directly after graduation from school?  
A  Yes  
B  No
18. If the answer is NO did you attend one of the following types of schools between high school graduation and enrollment in this school of nursing?  
A  Vocational nursing program

- B \_\_\_\_\_ Hospital (diploma) nursing program  
 C \_\_\_\_\_ Junior college (Associate degree) nursing program  
 D \_\_\_\_\_ Junior college non-nursing program  
 E \_\_\_\_\_ Have not attended any type of school between high school and present program.

19. If you earned a certificate, or degree, what was it?  
 A \_\_\_\_\_ Vocational Nursing credential  
 B \_\_\_\_\_ Associate in Arts Degree  
 C \_\_\_\_\_ Baccalaureate Degree  
 D \_\_\_\_\_ Did not receive a credential or degree
20. How much formal education did your father have?  
 A \_\_\_\_\_ 8th grade or less  
 B \_\_\_\_\_ 12th grade or less  
 C \_\_\_\_\_ technical school  
 D \_\_\_\_\_ some college  
 E \_\_\_\_\_ finished college
21. What is the approximate net income of your immediate family? (Your parents if you are not married; you and your husband if you are married?)  
 A \_\_\_\_\_ Less than \$6,000  
 B \_\_\_\_\_ \$7,000 to \$10,000  
 C \_\_\_\_\_ \$11,000 to \$15,000  
 D \_\_\_\_\_ over \$15,000  
 E \_\_\_\_\_ Don't know

If you have any close relatives (immediate family, grandparents, aunts, uncles or first cousins) in the following occupations please specify occupation(s). (Check as many as apply)

22. \_\_\_\_\_ Nursing (Registered)  
 23. \_\_\_\_\_ Nursing (Vocational)  
 24. \_\_\_\_\_ Nurses Aide  
 25. \_\_\_\_\_ Medicine  
 26. \_\_\_\_\_ Associated Medical or dental services, such as (X-ray, laboratory technicians)
27. At what age did you definitely decide to study nursing?  
 A \_\_\_\_\_ In grammar school  
 B \_\_\_\_\_ In adolescence  
 C \_\_\_\_\_ Between ages 18 and 21  
 D \_\_\_\_\_ Age 21 or after
28. Before deciding on your present career choice did you ever seriously consider any other occupation?  
 A \_\_\_\_\_ Yes  
 B \_\_\_\_\_ No

29. If the answer is Yes, which one of the following occupations would have been your first choice?
- A  Vocational nursing  
 B  Associate Degree nursing  
 C  Baccalaureate degree nursing  
 D  Teaching  
 E  Associated Medical or dental services, such as (X-ray, laboratory technicians)

Who or what was the most influential in your choice of nursing as a career? (Place an A in front of the category indicating the most influence, a B in front of the category second in influence and a C in front of the category third in influence.)

30.  Close family members  
 31.  High school counselor  
 32.  Friends who are nurses or nursing students  
 33.  Community college counselor  
 34.  Own decision
35. Did you receive specific help in making your career choice from a high school counselor?  
 A  Yes  
 B  No
36. Did you receive specific help in making your career choice from a college counselor?  
 A  Yes  
 B  No

How important were the following reasons in your selection of nursing as your career choice?

Mark either A, B, C or D on line 29, 30, 31 or 32:

Mark A if not important

Mark B if only slightly important

Mark C if important

Mark D if extremely important

37.  General interest in and liking for people  
 38.  interest in the medical field  
 39.  worthy use of one's life  
 40.  interest in keeping people well

41. Are you presently satisfied with your vocational choice?  
 A  not satisfied  
 B  slightly satisfied  
 C  satisfied  
 D  extremely well satisfied

42. If the answer to the above question was not satisfied, or slightly satisfied, do you plan to:

- A \_\_\_\_\_ Continue with your present program  
 B \_\_\_\_\_ Drop out of school entirely  
 C \_\_\_\_\_ Transfer to a different school  
 D \_\_\_\_\_ Transfer to another program in your own school

What three reasons were most important in the selection of the occupational program (VN, ADN, BDN) in which you are enrolled? (Place an A in front of the category indicating the most important, a B in front of the category second in importance and a C in front of the category third in importance.)

43. \_\_\_\_\_ Cost of program best suited my financial resources  
 44. \_\_\_\_\_ Type of program which best prepares me for what I want to do  
 45. \_\_\_\_\_ Opportunity for a college experience  
 46. \_\_\_\_\_ Opportunity to earn credit toward a college degree or certificate  
 47. \_\_\_\_\_ I could meet the admission requirements

48. If you had to choose over again would you still pick the type of program and school you are now in?

- A \_\_\_\_\_ Yes  
 B \_\_\_\_\_ No

49. If the answer is No which one type would you choose?

- A \_\_\_\_\_ Vocational nursing program  
 B \_\_\_\_\_ Associate Degree program in nursing  
 C \_\_\_\_\_ Diploma (Hospital) Nursing program  
 D \_\_\_\_\_ Baccalaureate (Four year program) in a state college  
 E \_\_\_\_\_ Baccalaureate (Five year program) in a university school

50. If money and location of the program were not important, which of the following would you choose?

- A \_\_\_\_\_ Vocational nursing program  
 B \_\_\_\_\_ Associate Degree program in nursing  
 C \_\_\_\_\_ Diploma (hospital) Nursing program  
 D \_\_\_\_\_ Baccalaureate (Four year program) in a state college  
 E \_\_\_\_\_ Baccalaureate (Five Year program) in a university school

51. Do you plan to work as a nurse following graduation from your present program?

- A \_\_\_\_\_ Yes  
 B \_\_\_\_\_ No

52. If you plan to work, which type of nursing activity do you now think you will select for your first position after graduation?

- A \_\_\_\_\_ Staff nursing in a general hospital  
 B \_\_\_\_\_ Private duty nursing  
 C \_\_\_\_\_ Nursing in a hospital for the mentally ill  
 D \_\_\_\_\_ Nursing in a nursing home (geriatric patients)  
 E \_\_\_\_\_ Head nurse in a hospital

If you could select the type of nursing activity that appeals to you most for your first position after graduation, regardless of your educational preparation, which one of the following would you choose? (Consider 53 and 54 as one question).

53. A \_\_\_\_\_ Staff nurse in a general hospital  
 B \_\_\_\_\_ Private duty nursing  
 C \_\_\_\_\_ Office nursing (doctor's office)  
 D \_\_\_\_\_ Public health nursing  
 E \_\_\_\_\_ School nursing (public school system) or industrial nursing
54. A \_\_\_\_\_ Nursing in a hospital for the mentally ill  
 B \_\_\_\_\_ Nursing in a nursing home (geriatric patients)  
 C \_\_\_\_\_ Operating room nursing  
 D \_\_\_\_\_ Head nurse in a hospital  
 E \_\_\_\_\_ Teacher in a school of nursing

As you think about your future as a nurse what type of position would you like to have eventually? Select one. (Consider 55 and 56 as one question.)

55. A \_\_\_\_\_ Hospital staff nurse  
 B \_\_\_\_\_ Hospital Head nurse  
 C \_\_\_\_\_ Hospital nursing service administrator  
 D \_\_\_\_\_ Public health nurse  
 E \_\_\_\_\_ Public health nursing supervisor
56. A \_\_\_\_\_ Nurse in a doctor's office  
 B \_\_\_\_\_ Private duty nurse  
 C \_\_\_\_\_ School nurse (public school system) or industrial nurse  
 D \_\_\_\_\_ Teacher in a school of nursing  
 E \_\_\_\_\_ Director of a school of nursing

57. Do you plan to go on in school after finishing your present studies?  
 A \_\_\_\_\_ Yes  
 B \_\_\_\_\_ No

If the answer is Yes, what do you plan to go on to: (Consider 58 and 59 as one question).

58. A \_\_\_\_\_ Associate program with a major in nursing  
 B \_\_\_\_\_ Associate program with a major in another field  
 C \_\_\_\_\_ Four or five year college with a major in nursing  
 D \_\_\_\_\_ Four or five year college with a major in another field  
 E \_\_\_\_\_ Master's program with a major in nursing
59. A \_\_\_\_\_ Master's program with a major in another field  
 B \_\_\_\_\_ Adult education courses for general interest.
60. If you plan to continue your education how soon do you plan to start after completion of your present program?  
 A \_\_\_\_\_ Within a year of graduation  
 B \_\_\_\_\_ Within three years of graduation  
 C \_\_\_\_\_ Within five years of graduation  
 D \_\_\_\_\_ Within ten years of graduation  
 E \_\_\_\_\_ Indefinite

APPENDIX F

## COMPARING VOCATIONS QUESTIONNAIRE

VOCATIONAL NURSE (VN)  
 ASSOCIATE DEGREE NURSE (ADN)  
 BACCALAUREATE DEGREE NURSE (BDN)

These are all nursing practitioners with different educational preparation. Please indicate which vocation makes the statement "True." GIVE ONLY ONE ANSWER TO EACH QUESTION, BUT DON'T SKIP ANY.

Mark A if Vocational Nursing is seen to make the statement True.

Mark B if Associate Degree Nursing is seen to make the statement True.

Mark C if Baccalaureate Degree Nursing is seen to make the statement True.

- | A  | B   | C   |                                                                                                                                         |
|----|-----|-----|-----------------------------------------------------------------------------------------------------------------------------------------|
| VN | ADN | BDN | 1. provides the greatest amount of personal satisfaction.                                                                               |
| VN | ADN | BDN | 2. is <u>not</u> qualified to do managerial or supervisory jobs on nursing units.                                                       |
| VN | ADN | BDN | 3. gives one the greatest amount of prestige.                                                                                           |
| VN | ADN | BDN | 4. has the least expensive program of preparation.                                                                                      |
| VN | ADN | BDN | 5. involves the least difficult subjects in the preparation period.                                                                     |
| VN | ADN | BDN | 6. is the foundation for teaching.                                                                                                      |
| VN | ADN | BDN | 7. renders direct patient care in complex nursing situations requiring nursing judgments.                                               |
| VN | ADN | BDN | 8. requires the greatest amount of intelligence.                                                                                        |
| VN | ADN | BDN | 9. gives the best opportunities to hold positions of authority.                                                                         |
| VN | ADN | BDN | 10. is the most highly respected by the public.                                                                                         |
| VN | ADN | BDN | 11. provides the greatest opportunity to have responsibility.                                                                           |
| VN | ADN | BDN | 12. the graduate is qualified to assist registered nurses with complex nursing care.                                                    |
| VN | ADN | BDN | 13. requires 12 to 18 months of study.                                                                                                  |
| VN | ADN | BDN | 14. involves the largest number of pleasant tasks.                                                                                      |
| VN | ADN | BDN | 15. involves the shortest period of education beyond high school.                                                                       |
| VN | ADN | BDN | 16. is referred to as a "technical nurse."                                                                                              |
| VN | ADN | BDN | 17. the graduate is qualified to give nursing care under supervision of the registered nurse or physician in simple nursing situations. |
| VN | ADN | BDN | 18. provides the greatest financial rewards.                                                                                            |
| VN | ADN | BDN | 19. involves the most difficult subjects in the preparation period.                                                                     |
| VN | ADN | BDN | 20. gives the basic preparation for public health nursing.                                                                              |
| VN | ADN | BDN | 21. requires about two years of study.                                                                                                  |
| VN | ADN | BDN | 22. is most scientific in knowledge required.                                                                                           |
| VN | ADN | BDN | 23. gives nursing care in any location.                                                                                                 |
| VN | ADN | BDN | 24. is taught in a community college, or adult education center.                                                                        |
| VN | ADN | BDN | 25. recognizes the individual's need for instruction related to health needs and takes action to provide the instruction.               |
| VN | ADN | BDN | 26. is taught only in the community college.                                                                                            |

- VN ADN BDN 27. is the basic preparation for graduate study.
- VN ADN BDN 28. directs and guides team members with less experience and education.
- VN ADN BDN 29. is the foundation for research.
- VN ADN BDN 30. is not qualified to function without registered nurse supervision or supervision of a physician.
- VN ADN BDN 31. requires the greatest amount of educational preparation.
- VN ADN BDN 32. requires 4 or 5 years of college study.
- VN ADN BDN 33. the graduate is to give nursing care primarily of a physical nature and not instructional.
- VN ADN BDN 34. is taught in state college or university.
- VN ADN BDN 35. is eligible for appointment as a commissioned officer.



APPENDIX G

## COUNSELOR INTERVIEW INVENTORY

I. PERCEPTION OF PROGRAMS:

- (1) In your opinion, what is the reason a student chooses:
  - (a) Vocational nursing
  - (b) Associate Degree Nursing
  - (c) Baccalaureate Degree Nursing
- (2) Why does a student enter vocational nursing, then later enter the associate degree nursing, rather than originally entering associate degree nursing?
- (3) Why does a student enter associate degree nursing, then later enter the baccalaureate degree nursing, rather than originally entering baccalaureate degree nursing?

APPENDIX H

## STUDENT INTERVIEW INVENTORY

I. STUDENT CHOICE:

- (1) Are you in the nursing program of your choice?
- (2) If not, what would you have preferred?
- (3) Why are you not in your preferred program?
- (4) Do you intend to change to that program?

II. PERCEPTION OF PROGRAMS:

- (1) In your opinion, what is the reason a student chooses:
  - (a) Vocational nursing
  - (b) Associate Degree Nursing
  - (c) Baccalaureate Degree Nursing
- (2) Why does a student enter vocational nursing, then later enter the associate degree nursing, rather than originally entering associate degree nursing?
- (3) Why does a student enter associate degree nursing, then later enter the baccalaureate degree nursing, rather than originally entering baccalaureate degree nursing?