LIMITED VARIABLES COMPARED WITH SUCCESS/FAILURE OF ASSOCIATE DEGREE GRADUATE NURSES WHO WERE FIRST-TIME WRITERS OF THE STATE BOARD TEST POOL EXAMINATIONS

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CHAPTER I

INTRODUCTION

The opportunity to practice nursing in the United States as a Registered Nurse (RN) depends upon successful performance on a written State Board Test Pool Examination (SBTPE). This examination is a national examination given to all prospective candidates two times each year for two successive days. According to the Oklahoma Board of Nurse Registration and Nursing Education (OBNR & NE, 1974)

> . . . an applicant for licensure to practice as a registered nurse shall submit to the Board /of Nurse Registration and Nursing Education - OBNR AND NE/ certified written evidence that siad applicant: (1) is of good moral character, (2) has completed at least an approved high school course of study or the equivalent thereof as determined by the State Department of Education, (3) has completed the basic professional curricula of a school of nursing approved by the Board, and holds a diploma or degree therefrom, or both, and (4) has met other qualifications as the Board may prescribe (pp. 5-6).

An applicant for a Registered Nurse license is required to pass a written examination in five subject areas (OBNR & NE, 1974). A minimum passing score of 350 on each test is required to pass the series. The individual who passes the examination is registered in the state in which the examination was taken and can practice nursing in that state as a Registered Nurse.

The number of Associate Degree Nursing program graduates who pass the SBTPE as first-time writers fluctuates from program to program and from year to year. The number of graduates who were unsuccessful

writers in Oklahoma during the year 1979 was 28.5% of those taking the examination.

Statement of the Problem

Failure on the SBTPE prevents graduates from working as Registered Nurses until such time as the examination is repeated and they are successful. This represents an economic loss to the individual; there is a loss of personnel in the health care system; and there is a loss of self-esteem from the failure. Though a relatively high proportion of those taking the examination fail to pass, little information is available to assist counselors and faculty members in identifying those who are likely to fail the examination so they might be counseled early in the program with the goal of increasing their chances of passing.

Purpose of the Study

The purpose of this study was to determine if selected characteristics of students in Associate Degree Nursing programs are predictors of success or failure of first-time writers of SBTPE. Writers were graduates of Nursing programs in Oklahoma. Characteristics studied were sex, age groupings, previous secondary education, race, and ACT scores.

Need for the Study

Evidence that the need exists for a study such as this in Oklahoma is demonstrated by the number of students who complete the two-year programs and then fail the examination. Graduates who complete a program and fail the examination the first time they write are not allowed to work as either a graduate nurse or a registered nurse for at least

six months. They can repeat the examination the next time that the test is offered.

A possible result of this study will demonstrate the need for improved personal and academic counseling both prior to entry into nursing, and during the education program itself.

Objectives of the Study

The objectives of this study were to analyze background information on graduates of Associate Degree Nursing programs in Oklahoma to determine if:

(1) Age was a factor in success/failure of first-time writers of SBTPE.

(2) Sex was a factor in success/failure of first-time writers of SBTPE.

(3) Race was a factor in success/failure of first-time writers of SBTPE.

(4) Secondary educational background was a factor in success/failure of first-time writers of SBTPE.

(5) ACT scores were factors in success/failure of first-time writers of SBTPE.

A possible result of this study is that admission and counseling in schools of nursing in Oklahoma will be executed more carefully by admissions committees.

Limitations

This study was confined to the use of school records and SBTPE scores from eight Associate Degree Nursing (ADN) programs in the state

of Oklahoma during the years 1975-1979. The study was to have included ten schools that were operational during this period of time, however, two schools were unable to provide the necessary information. There were instances in all schools when information about specific students was not available. In these cases, that student was omitted from the study.

CHAPTER II

REVIEW OF THE LITERATURE

The purpose of this study was to examine the success/failure reports on first-time writers of the SBTPE who were graduates of eight Associate Degree Nursing (ADN) programs in Oklahoma as compared to sex, age groupings, previous secondary education, race, and ACT scores during the years 1975-1979. These graduates were all first-time writers of the SBTPE.

The review of this literature is divided into three parts. First, a summary of the ACT assessment program, the general characteristics and the use of the data and services. Second, a review of the history of ADN programs and their initial purpose; success/failure and what it means to graduates and nursing administrators; factors not measured, but significant, such as motivation, finances, family responsibilities. Third, a review of the meaning of SBTPE and significance for the health profession of nursing.

The ACT Assessment Program

The ACT is a comprehensive examination consisting of four timed sub-tests. Sub-test areas are English Usage, Mathematics Usage, Social Studies Reading, and Natural Sciences (Appendix B).

Each year the ACT Program publishes a handbook entitled "The ACT Assessment Program." It is revised each year based on the number of

students who took the ACT tests for the previous year. Since it is revised each year, the norms for the college-bound students change and for approximately the last 10-15 years, the composite scores for college-bound students in Oklahoma has declined gradually, but consistently.

The general characteristics of the ACT Standard Score scale have a range scale from 1 to 36. The standard error of measurement is 1 to 2. The approximate mean composite score of college-bound students in 1979-1980 was 18.

If properly used, the ACT data provides a comprehensive record that can be analyzed to assist in student counseling. The assessment itself provides an excellent indication of the student's level of educational development.

The ACT composite score is frequently used in selective admission situations. In 1978-1979, the mean ACT composite score for college-bound high school students was approximately 19. Scores between 15-20 should be considered low average, and scores between 20 and 25 should be considered high average. Scores above 25 are clearly superior and scores below 15 indicate a student with a restricted educational development background. Older students or "adults" who have been out of high school for several years and take the ACT assessment typically do not score as high as current high school students. These same "adults" who enter college tend to be more highly motivated and earn higher grades in college than younger students. Clemence et al. (1978) found that age, prior education, work, nursing "experience" -- nothing was consistently related to terminal outcomes and goals. Perez wrote in the October, 1977, Journal of Nursing Education that three variables

appeared most sensitive as predictors of success. They were the ACT Social Science Reading Score, GPA upon completion of the freshman year and the GPA for courses in prerequisite social sciences taken as a group. She also reported significant differences in the mean ACT scores and mean GPA's of graduates who pass Board exams as opposed to those who fail one or more exam.

According to the literature, numerous research studies show that tests (ACT and others) are as predictive of college grades for minority or disadvantaged students as they are for middle class white students.

An article that dealt with licensure of long-term care administrators indicated that the age group with the highest score average was 26-30-year-olds. Those who do least well on their examination are below 26 and above 50 years of age (Guillion, 1978).

Mueller and Layman (1969) in a study on Prediction on Examination Scores state that although the use of predictive measures should assist in the selection of students who are likely to succeed, rigid use of the predictive measures has implications for not accepting some students who might very well succeed because of motivation. The interview is an acceptable way to aid in admission procedures; however, it is very time consuming and costly in time needed to interview all applicants.

Whittmeyer (1971) and others question the validity of any selection procedures. They believe that selection procedures that are efficient and hold up well under replication are difficult to achieve and if they utilize personality measures, the end product might tend to be a somewhat stereotyped student body. The question then arises, should we all be alike? Should we have open admission policies so that anyone, or everyone, has the same opportunity to enroll?

ADN Programs

A courageous nurse educator and researcher, Mildred L. Montag (1959), compiled a report entitled "Community College Education for Nursing: An Experiment in Technical Education for Nursing."

> There is growing interest and effort within the nursing profession to realign education for nursing in harmony with changing functions in nursing. The need for the nurse who is able to perform the professional functions of nursing is clear. Equally clear is the need for those to carry on the technical, or semi-professional functions and it is in this area that great numbers of nurses are needed. Therefore, the move toward the development of both the four-year, professional type of program is consistent with the need for nurses to carry on the whole range of nursing functions (p. 3).

And Associate Degree Nursing Programs were born. The first program in Oklahoma opened at Bacone College and the second was at Cameron University.

The aims of the Montag project were concerned primarily with the graduates of the new type of program. It was hoped that the graduates would:

> Qualify for the registered nurses' license
> Meet the junior-community college requirement for the associate degree
> Perform technical (or semi-professional) functions at the registered nurse level
> Be prepared for beginning practitioner positions (with supervision and, if possible, in situations where inservice training would be available)
> On graduation, be prepared to become competent nurses rather than be fully competent.

The last anticipated outcome had to do with the program itself.

> This new type of program would be terminal, but qualified individual graduates would be eligible for professional education in nursing at the upper-division level (p. 4).

Nursing programs are more expensive to operate than most other collegiate programs primarily because of the low student-faculty ratio.

This low ratio is essential because of the high-risk supervision that must be given individually or in a small group. For this reason extreme care is taken not to overload faculty members.

Schools of nursing are encouraged to develop innovative programs, to integrate the curriculum and to use nursing (not medicine) as the framework of learning. Although the National League for Nursing encourages both starting programs and established programs to utilize integrated curriculum, the State Board Examinations presently being used are written according to the medical model; that is, there are Medical, Surgical, Maternity, Pediatric, and Psychiatric sections.

Controversy over the relation of theory to practice is prennial. Programs respond to the pressure to improve the academic level of qualifications and frequently the hours of clinical time is decreased, yet performance expectations increase. Repetition in skills can only be done by repeated clinical performance and yet, time is insufficient. Since Montag's (1959) original thesis stated that nursing graduates should "be prepared to <u>become</u> competent nurses rather than <u>be</u> fully competent" it is the desire of this author to assess the SBTPE scores versus the admission information to determine what admission information appears to be most significant for successful performance on the examinations.

Success/failure of any act, deed, procedure, transaction, job, business, or educational program brings with it a variety of reactions. The tension and anxiety of graduates as they anticipate writing the SBTPE builds from the time of graduation until the actual days of writing occur. Workshops have been initiated in some schools of nursing to teach students how to cope with stress and how to lower their anxiety

level. Stress has been identified as a contributing factor in the failure of some of the graduates.

Another reason considered for examination failures is negative attitude. The most intelligent and dedicated nurses do not always pass examinations. Shame, remorse, and self-pity can erode the self-image and can undermine confidence. The damage can only be repaired when faults are recognized and attitudes changed. The only way to build, retain, or regain confidence is by being thoroughly prepared. Confidence is of prime importance to success.

Jeyam et al. (1978) say that memory and study techniques which are successful include shock, rhyming, comparisons and contrasts. It is helped by interest, keen observation, concentration, association, mnemonics, and meaningful understanding. The association of ideas is the foundation of an efficient memory. Over-learning is essential for permanent recall and retention.

Dr. Janet A. Williamson (1976) states that since persons cannot use competencies they do not possess, the setting of standards that are adequate to meet the aspirations of the profession must begin in the educational programs. She further states that the presence of two, three, and four-year programs all leading to the same licensure is a serious impediment to rigorous standard-setting. The only consistent standard is the writing of the board examinations for licensure. This is a limited instrument at best because it measures only cognitive data and has little predictive value as to the quality of professional performance that will emerge.

Dr. Williamson further states that one way of establishing standards for nursing education would be to have one set of qualifications

for faculty that would be uniform in all types of schools of nursing. Even though the profession has one type of lecensure for three types of programs, there is still one way to have quality control and that is through establishing eligibility for faculty appointment. The National League for Nursing (1977) has as one of its criteria minimal standards for faculty members in accredited schools of nursing. Unfortunately, in Oklahoma there is a dearth of faculty and so credentials vary from school to school and from year to year. This would be the basis for another study concerned with success/failure of candidates--the educational qualifications of faculty members present in those programs during the period of time that a student was enrolled and subsequently graduated.

Once a student has graduated from an approved program, that student is qualified to apply to work as a graudate nurse with a work permit. Upon unsuccessful performance on the SBTPE, the work permit is recalled immediately. Nursing administrators express concern over this failure rate for this means that following employment and orientation, statewide, approximately one-fourth of those new graduates may not be employable. This cuts deeply into a staffing pattern concerned with giving quality care to patients.

State Board Test Pool Examinations (SBTPE)

The broad purposes of the SBTPE are (1) to test candidates for licensure to determine whether their knowledge of principles and practices of nursing is sufficient to qualify them for licensure as safe and effective practitioners, and (2) to protect society by excluding from practice those found to be unsafe because of low achievement on

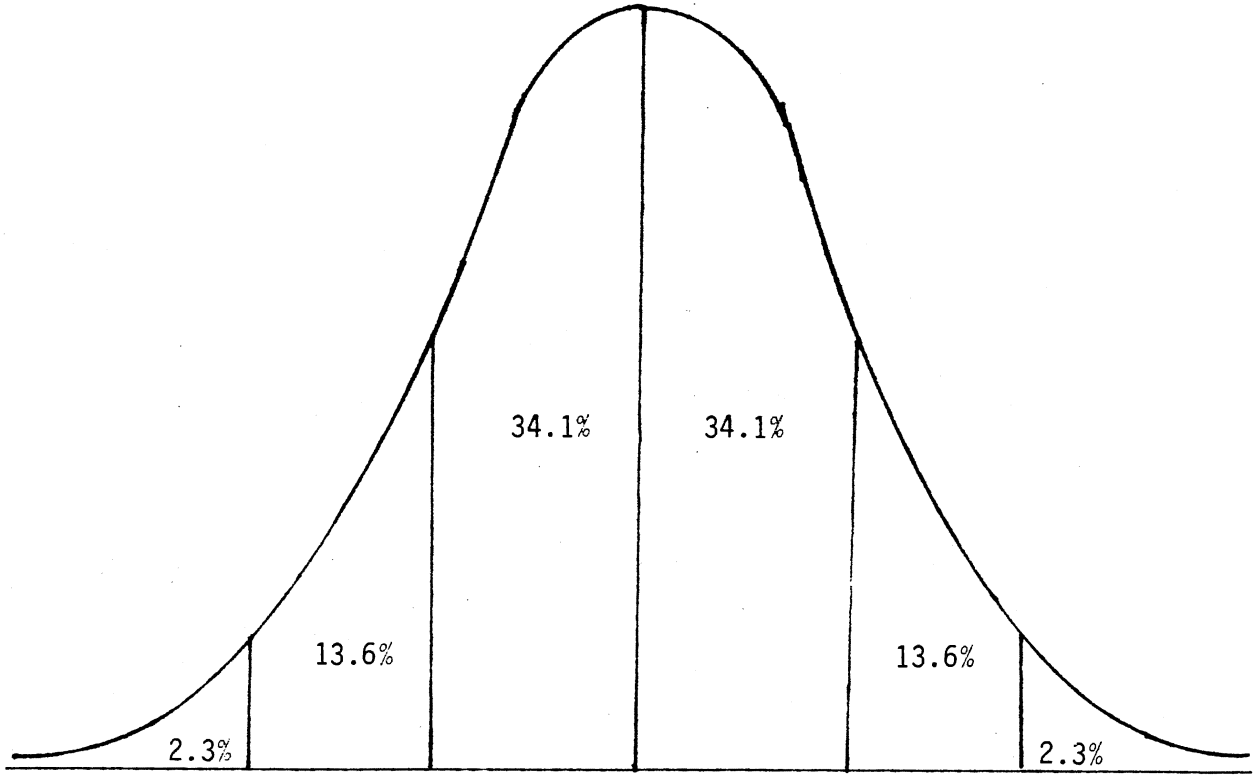
the examination.

In 1942 the idea of a nationwide state board test was presented that would not only provide for the states their right to set standards for licensure in their jurisdiction but would also establish a common ground for judging nurses on a nationwide basis. Again, the state board of nursing would set individual pass/fail requirements. By 1945, 25 boards of nursing subscribed to this service. By 1950, all states had accepted it.

As presently designed, the SBTPE is a norm-referenced examination. (If each exam is standardized on the total population who wrote the exam, it is a norm-referenced exam.) To standardize the results of the test, a scale was proposed that set 500 as the mean and 100 as the standard deviation. A cut-off point of 350 (1.5 s.d. below the mean) was recommended for passing (Figure 1). Gradually, practically all jurisdictions accepted this standard for passing each test in the examination for applicants for licensure.

Although nursing practice varies from state to state, all require successful completion of an examination. Basic purpose of the examination is to assure that the nurse about to enter practice will at least be minimally competent and safe in delivery of care to patients. Each state board of nursing in the United States is charged by law to define the legal parameters of nursing. To meet this requirement, nurses are licensed upon successful completion of the SBTPE.

The SBTPE concists of separate tests in each of five areas: medical nursing, surgical nursing, obstetric nursing, nursing of children, and psychiatric nursing. Each test contains from 90 to 125 multiple-choice questions. One requirement for licensure is that the



Standard Deviation Units	-3.0	-2.5	-2.0	-1.5	-1.0	-0.5	0	+0.5	+1.0	+1.5	+2.0	+2.5	+3.0
Standard Scores used by State Board Test Pool	200	250	300	350	400	450	500	550	600	650	700	750	800
Percentile Ranks	00+	01	02	07	16	31	50	69	84	93	98	99	99+

Figure 1. The Theoretical Normal Curve and Its Relationship to Standard Scores (SBTPE) and Percentile

candidate must earn a passing score in each of the five tests.

A publication, Prediction of Successful Nursing Performance, Part I and Part II, was based on a study done by Patricia M. Schwirian, PhD (1977). An extended table relating to prediction studies: State Board Test Pool Examination performance has been extracted from the study and is replicated on pages 16 through 21 of this paper.

A 1967 study by Ruix et al. investigated certain selected personal characteristics of graduates as related to success on the licensure exam. They found that in general, intellectual potential was the most reliable predictor of success with other factors playing relatively negligible roles. They also found that the more areas a graduate fails on the original examination, the smaller the probability that they will ever become a registered nurse.

An article written in 1978 by DeMarco et al. compared Associate, Diploma, and Baccalaureate degree nurses State Board performance, quality of patient care, competency rating, supervisor rating, subordinates' satisfaction with supervision and self-report job satisfaction scores and found only slightly higher scoring (total percentage) of baccalaureate degree nurses, but no difference in their nursing practice.

At a meeting in Tulsa, Oklahoma, February, 1980, Dr. Eileen McQuaid spoke to interested faculty members from all registered nurse programs in Oklahoma. She spoke of a revised State Board Test Pool Examination which will be used for the first time in 1982. This examination will be based on the nursing model, rather than the medical model, and will be an integrated examination with only one final score. This information then raises the questions "Were the individuals who have not been suc-

cessful in passing the medically-oriented examination, students who might have been successful candidates on a nursing-oriented examination?" and, "Could their failure have been due in some way to the written medically-oriented examination itself?"

These questions can never be answered; however, it does make one aware of another aspect to be taken into consideration in addition to the student qualifications.

Numerous studies have been conducted involving relatively small numbers of nursing students as indicated in Table I. Findings of these studies have varied as to predictors of success. No one factor has been identified to assure a student of success upon graduation and subsequently taking the SBTPE.

TABLE I

PREDICTION STUDIES: STATE BOARD TEST POOL EXAMINATION PERFORMANCE

Year	Investigators	Predicted	Measure of Predicted Variables	Predictors	Measure of Predictor Variables	Group N	Findings
1966	Brandt, Hastie, and Schumann (54)	SBTPE Performance		Academic achievement	Nursing theory and practice grades	156 juniors in 2 consecutive classes	Best predictors were: nursing theory grades, Washington Natural and Social Science Test scores, and the NLN Medical-Surgical Achievement Test scores
					NLN Achievement Test scores Washington Natural and Social Science Test		
				Nursing course sequence			

TABLE I (Continued)

Year	Investigators	Predicted	Measure of Predicted Variables	Predictors	Measure of Predictor Variables	Group N	Findings
1966	Blaylock (47)	SBTPE performance		1) Number and variety of clinical facilities available to students 2) Mean size of facility and total number of patients using facility 3) Years of teaching experience by full-time nursing instructors 4) Degrees held by full-time instructors 5) Number of factors considered in student selection 6) Teacher-student ratio		273 A.D. graduates from 24 programs	Only characteristic of significance was degree held by full-time nursing instructors

TABLE I (Continued)

Year	Investigators	Predicted	Measure of Predicted Variables	Predictors	Measure of Predictor Variables	Group N	Findings
				7) Number of required units 8) Age of nursing program 10) Age of the college nursing program is affiliated with 11) Size of college 12) Research and publication by nursing faculty 13) "Team teaching" 14) Curricular approaches oriented toward "patient needs"		

TABLE I (Continued)

Year	Investigators	Predicted	Measure of Predicted Variables	Predictors	Measure of Predictor Variables	Group N	Findings
1968	Baldwin, Mowbray, and Taylor (27)	SBTPE performance		Academic Achievement	Nursing theory grades	113 diploma graduates	NLN Achievement Tests were good predictors; theory grades were not
					NLN Achievement Test scores		
1968	Ledbetter (193)	SBTPE performance		Scholastic aptitude	ACT	61 generic and 94 RN students in a baccalaureate program	ACT, NLN Achievement Tests, and final GPA were predictive; clinical course grades were not
				Academic achievement	NLN Achievement Test scores		
					Nursing course grades		

TABLE I (Continued)

Year	Investigators	Predicted	Measure of Predicted Variables	Predictors	Measure of Predictor Variables	Group N	Findings
1970	Reekie (308)	SBTPE performance		Personality factors (perception, judgment, and self-actualization)	MBTI	158 senior nursing students	Sophomore GPA was best predictor
					POI		
				Biographical factors	Biographical Inventory		
1971	Muhlenkamp	SBTPE performance		Academic achievement	Nursing and nursing related course grades	96 baccalaureate uates from 2 consecutive classes	Multiple correlations ranged from .66 to .83; best predictors were seventh semester GPA and the NLN Natural Science Test
					Seventh-semester GPA		
					NLN Achievement Test		
				Scholastic aptitude	SAT		
					Entering English Test Scores		

TABLE I (Continued)

Year	Investigators	Predicted	Measure of Predicted Variables	Predictors	Measure of Predictor Variables	Group N	Findings
1971	Papcum (290)	SBTPE performance		Academic achievement	NLN Achievement Test scores	23 A.D. graduates	All but 1 correlation was significant; best overall predictor was NLN test in maternal-child nursing
1975	Dubs (102)	SBTPE performance		Academic achievement	Grades in nursing school	30 diploma graduates	Final GPA and nursing theory grades were best predictors

"Prediction of Successful Nursing Performance," Part I and Part II; Patricia M. Schwirian, PhD.; DHEW Publication Number (HRA)77-27.

CHAPTER III

METHODOLOGY

This study was conducted in cooperation with the eight ADN programs that were operating in the fall of 1978 when the research proposal was written; with the Oklahoma Board of Nurse Registration and Nursing Education; and the Oklahoma Regents for Higher Education. The eight ADN programs included in this study were:

Bacone College, Muskogee

Cameron University, Lawton

Eastern Oklahoma State College, Wilburton

Murray State College, Tishomingo

Northeastern Oklahoma A & M College, Miami

Northern Oklahoma College, Tonkawa

Oklahoma State University Technical Institute, Oklahoma City

Seminole Junior College, Seminole

Purpose of the Study

The purpose of this study was to determine if selected characteristics of students in nursing programs are predictors of success or failure of first-time writers of the SBTPE. The writers were graduates of eight Associate Degree Programs in Oklahoma during the years 1975-1979.

Selection of Subjects

This study was limited to the graduates of eight ADN nursing programs in Oklahoma during a five-year period (1975-1979). In some instances, personal data was not available on students who may have transferred into a program following the first semester. When the personal data was not available the student was not counted in the total. Cameron University is the only four-year institution that has an ADN program. The remaining programs are in either a Junior College or Technical Institute.

Collection of the Data

In the fall of 1978, a letter was written to Ms. Jenell Hubbard, Executive Director of the Oklahoma Board of Nurse Registration and Nursing Education, requesting an audience with the OBNR and NE Board of Directors to explain the proposal and request permission to use their reports. Confidentiality of the reports was assured in writing at this time and later in person (Appendix A).

A letter was also sent at this time to the chairmen of all Associate Degree programs in Oklahoma with a copy to the administrator of the same institution requesting their support and assistance (Appendix A).

Further approval was obtained from the office of the Oklahoma State Regents for Higher Education through Dr. Dan Hobbs.

The information requested from the schools of nursing included for each graduate:

Name

Age

Sex

High School Graduate or GED

Race

ACT Scores

The data obtained from the OBNR and NE was the results of the SBTPE for each designated program for each year that was included in the study.

The Ex Post Facto information was obtained by visits to the individual programs and visits to the office of the OBNR and NE. It was compiled by the author as it became available with due regard given to protect the privacy of each student.

Analysis of the Data

The raw information that was gathered from the individual nursing programs and the OBNR and NE was then converted by data processing to give complete information by year and by nursing program. The data processing programs were written to elecit only isolated variables with one comparison, sex, in relation to success or failure. There were no additional combinations programmed for comparison between the remaining variables.

Summaries of individual tables were compiled by the author and conclusions were drawn. Tabled summaries are found in Chapter IV while individual tables are located in Appendix B.

CHAPTER IV

RESULTS OF THE STUDY

Eight Associate Degree programs participated in the study. To provide an overall perspective of the status of the production of Associate Degree nurses in Oklahoma for the five-year period of 1975 to 1979, data relative to the number of graduates and the success of these graduates on the SBTPE was obtained from each participating institution (Table II). The individually detailed tables are found in Appendix B.

TABLE II

SUMMARY OF PASS-FAIL RATES ON SBTPE FOR ALL PROGRAMS FOR A FIVE-YEAR PERIOD (1975-1979)

	Number of Graduates	Passing		Failing	
		Number	Percent	Number	Percent
1975	244	203	83.1	41	16.9
1976	238	181	76.1	57	23.9
1977	287	217	75.6	70	24.4
1978	284	225	79.7	59	21.3
1979	216	176	71.5	70	28.5
N	1,299	1002	77.1	297	22.9

Variation was noted in the annual passing rate of all institutions over the years included in the study. The range was from a high passing rate of 83.1% in 1975 to a low passing rate of 71.5 in 1979. The percentage declined from 1975 to 1977, increased slightly in 1978, and then dropped 8.2% in 1979.

Table III includes detailed pass-fail information on an institutional basis by year. As information in the table indicates it may be observed that the passing rate has varied appreciably between programs as well as between years. The highest success rate of 100% was achieved by one program only and in two of the five years studied. The lowest passing rate of 50 percent was found in two different programs in two different years. The five-year average of success for the combined eight programs was 77.1 percent.

A comparison of the average of 77.1 percent with the eight participating programs is demonstrated in Table IV.

TABLE IV

PERCENT OF PASS-FAIL SUCCESS ABOVE OR BELOW FIVE-YEAR AVERAGE FOR ALL PROGRAMS

All-Program Average	Program Number	Five-Year Program Percent	Program Percent Above or Below Average
77.1%	1	78.1	1.0 ↑
	2	77.3	.2 ↑
	3	64.5	12.6 ↓
	4	85.9	8.8 ↑
	5	73.	4.1 ↓
	6	79.	9.1 ↑
	7	72.4	4.7 ↓
	8	82.7	5.7 ↑

TABLE III

SUMMARY OF PASSING RATES ON SBTPE FOR EIGHT ASSOCIATE DEGREE NURSING PROGRAMS OVER A FIVE-YEAR PERIOD (1975-1979)

YEAR	PROGRAM #1		PROGRAM #2		PROGRAM #3		PROGRAM #4	
1975	N = 37		N = 20		N = 39		N = 49	
	Number Passing	Percent	Number Passing	Percent	Number Passing	Percent	Number Passing	Percent
	36	98	20	100	28	17.8	45	91.8
1976	N = 36		N = 25		N = 34		N = 44	
	Number Passing	Percent	Number Passing	Percent	Number Passing	Percent	Number Passing	Percent
	31	86	31	86	22	64.7	39	88.5
1977	N = 38		N = 31		N = 41		N = 78	
	Number Passing	Percent	Number Passing	Percent	Number Passing	Percent	Number Passing	Percent
	28	73.9	18	58.1	25	61	65	73.4
1978	N = 54		N = 20		N = 45		N = 82	
	Number Passing	Percent	Number Passing	Percent	Number Passing	Percent	Number Passing	Percent
	38	70.1	16	80	27	60	75	91.5
1979	N = 54		N = 19		N = 35		N = 43	
	Number Passing	Percent	Number Passing	Percent	Number Passing	Percent	Number Passing	Percent
	38	70.1	19	100	23	65.7	30	70

TABLE III (Continued)

YEAR	PROGRAM #5		PROGRAM #6		PROGRAM #7		PROGRAM #8	
1975	N = 14		N = 20		N = 38		N = 27	
	Number Passing	Percent	Number Passing	Percent	Number Passing	Percent	Number Passing	Percent
	7	50	16	80	29	76.3	22	81.4
1976	N = 21		N = 22		N = 33		N = 23	
	Number Passing	Percent	Number Passing	Percent	Number Passing	Percent	Number Passing	Percent
	13	62	14	63.6	26	78.8	20	86.9
1977	N = 17		N = 19		N = 41		N = 22	
	Number Passing	Percent	Number Passing	Percent	Number Passing	Percent	Number Passing	Percent
	15	88.5	18	94.7	34	83	14	63.6
1978	N = 18		N = 18		N = 22		N = 25	
	Number Passing	Percent	Number Passing	Percent	Number Passing	Percent	Number Passing	Percent
	16	88.8	14	77.7	17	77	22	88
1979	N = 15		N = 16		N = 40		N = 24	
	Number Passing	Percent	Number Passing	Percent	Number Passing	Percent	Number Passing	Percent
	11	73.3	13	81.2	20	50	22	83

Table V relates to age groups that are most commonly found in research studies. It is reported in terms of success for males and females.

TABLE V

TOTAL PASS-FAIL RATE ON SBTPE BY AGE GROUP AND SEX FOR YEARS 1975-1979

	Number of Graduates	Passing Number	Passing Percent	Failing Number	Failing Percent
Below 20 M	8	3	37.5	5	62.5
Fe	98	64	65.3	34	34.7
21-25 M	53	42	79.2	11	20.8
Fe	427	318	74.4	109	25.6
26-30 M	44	34	77.2	10	22.8
Fe	251	199	79.2	52	20.8
31-35 M	9	8	88.8	1	11.2
Fe	151	117	77.4	34	22.6
36-40 M	8	8	100	0	0
Fe	110	95	86.3	15	13.7
41-45 M	5	3	60	2	40
Fe	67	56	83.6	11	16.4
46-50 M	3	3	100	0	0
Fe	42	34	80.9	8	19.1
51-55 M	1	1	100	0	0
Fe	15	14	93.3	1	6.7
56-60 M	1	0	0	1	100
Fe	6	3	50	3	50
Above 60 M	0	0	0	0	0
Fe	0	0	0	0	0
N M	132	102	77.27	30	22.73
N Fe	1167	900	77.12	267	22.88
Total M and Fe	1299	1002	77.13	297	22.86

The largest number of graduates was concentrated in the 21-25 age group; the second largest number was in the 26-30 age group and

the third largest number was in the 31-35 age group.

Highly successful age groups were 36-40, 46-50, and 51-55. Below 20 and above 56 had failure rates of 34 percent or more.

The total number of males passing was 77.27 percent as compared to females' passing rate of 77.12 percent over the five-year period (Table VIII, Appendix B).

From the analysis, males with a GED represented .01 percent of the total population and passed at a rate of 81.8 percent. Males with a high school diploma that represented .01 percent of the population passed at a rate of 76 percent.

Female GED graduates represented 10 percent of the total population. The passing rate was 84 percent. Female graduates with a high school diploma represented 80 percent of the total population and passed at a rate of 74.6 percent.

The male and female GED and high school graduates are reported individually and as combined totals in table VI. (Individual tables area found in Table IX, Appendix B.)

TABLE VI

TOTAL PASS-FAIL ON SBPTE ACCORDING TO SEX AND HIGH SCHOOL OR GED BACKGROUNDS DURING YEARS 1975-1979

	Number of Graduates	Passing		Failing	
		Number	Percent	Number	Percent
Male GED	11	9	81.8	2	18.2
Female GED	132	111	84	21	16
Male HS	121	92	76	29	24
Female HS	1035	790	74.6	245	25.4
Total Male	132	101	76.5	31	23.5
Total Female	1167	901	75.8	266	24.2
Total Male & Fem	1299	932		297	

Identified minority graduates did not perform as well on the SBPTE as caucasian graduates. Unidentified minorities may have been included among the caucasian graduates since there is no uniformity in the identification process for minority students.

Indian males represented 4.5 percent of the total male population while black males represented 1.5 percent. There was one male included under "other" which represented .7 percent of the population. The male population was 93.3 percent caucasian.

The 95 Indian females represented 8 percent of the total female population. Black females represented 4.3 percent of the total. There were 18 females included under "other" which represents 1.3 percent of the total. The female population was 86.4 percent caucasian.

The individual numbers of graduates by race and sex and combined male and female totals are listed in Table VII. Individual program analyses are found in Table X, Appendix B.

TABLE VII

TOTAL PASS-FAIL RATES ON SBTPE ACCORDING TO RACE AND SEX DURING YEARS 1975-1979

		Number of Graduates	Passing		Failing	
			Number	Percent	Number	Percent
Indian	m	6	4	66.6	2	33.4
Indian	fe	95	57	60	38	40
Black	m	2	1	50	1	50
Black	fe	50	25	50	25	50
Caucasian	m	123	95	78	27	22
Caucasian	fe	1004	804	80	200	20
Other	m	1	0	0	1	100
Other	fe	18	15	83.3	3	36.7
Male	N	132	101	76.5	31	23.5
Female	N	1167	901	77.2	266	22.8
TOTAL M&F	N	1299	1002	77.1	297	22.9

In analyzing the ACT means of the nursing graduates who took the SBTPE during the period 1975-1979 the Natural Science Academic means are clearly above the other test areas, dropping somewhat in 1976 but gradually increasing to 21.5 in 1979. The Social Science Reading means indicated a decline from 1975 to 1978 when the figure rose to 19.2. The Math mean began in 1975 at 18.5, dropped in 1976, rose sharply in 1977 and declined very slightly in 1978 and 1979. The English means have fluctuated between a low of 14.3 to a high of 15.7 (Figure 2).

The 1979 composite for the 176 nursing graduates passing SBPTE's was 18.7.

Even in those failing the exam the Natural Science mean was higher than for all other areas and climbed from 1975-1979. The Social Science mean was 15.3 in 1975 and dropped to 12.6 in 1976. In 1977 it was again 15.3, dropping in 1978, and rising slightly in 1979. Math means have consistently increased whereas the English mean rose in 1976 but has gradually declined to a mean of 13.5 in 1979 (Figure 3).

The 1979 composite mean for the 70 graduates failing the exam was 15.6.

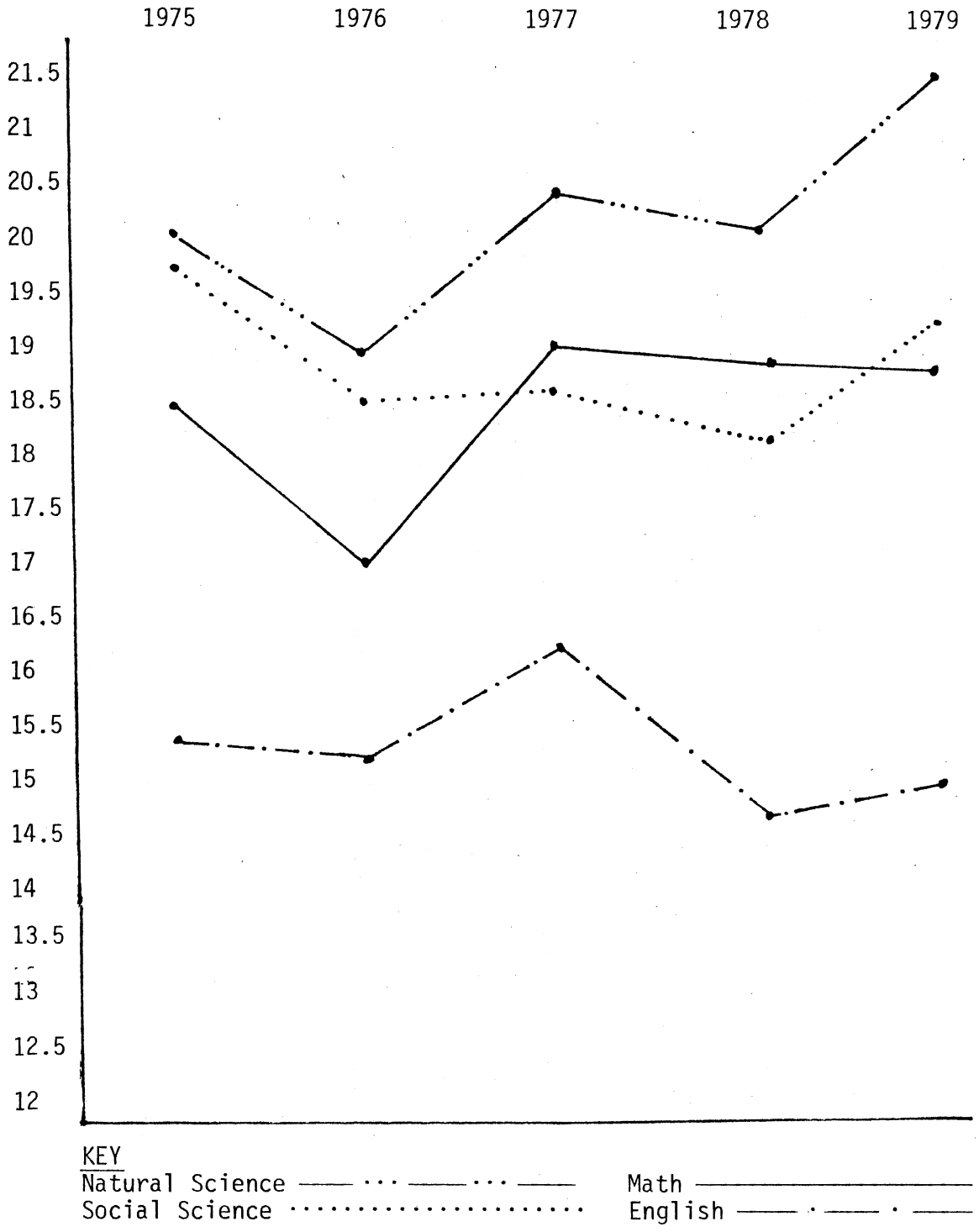


Figure 2. ACT Means of Passing Scores on SBTPE by Academic Test by Year Using Combined Program Means

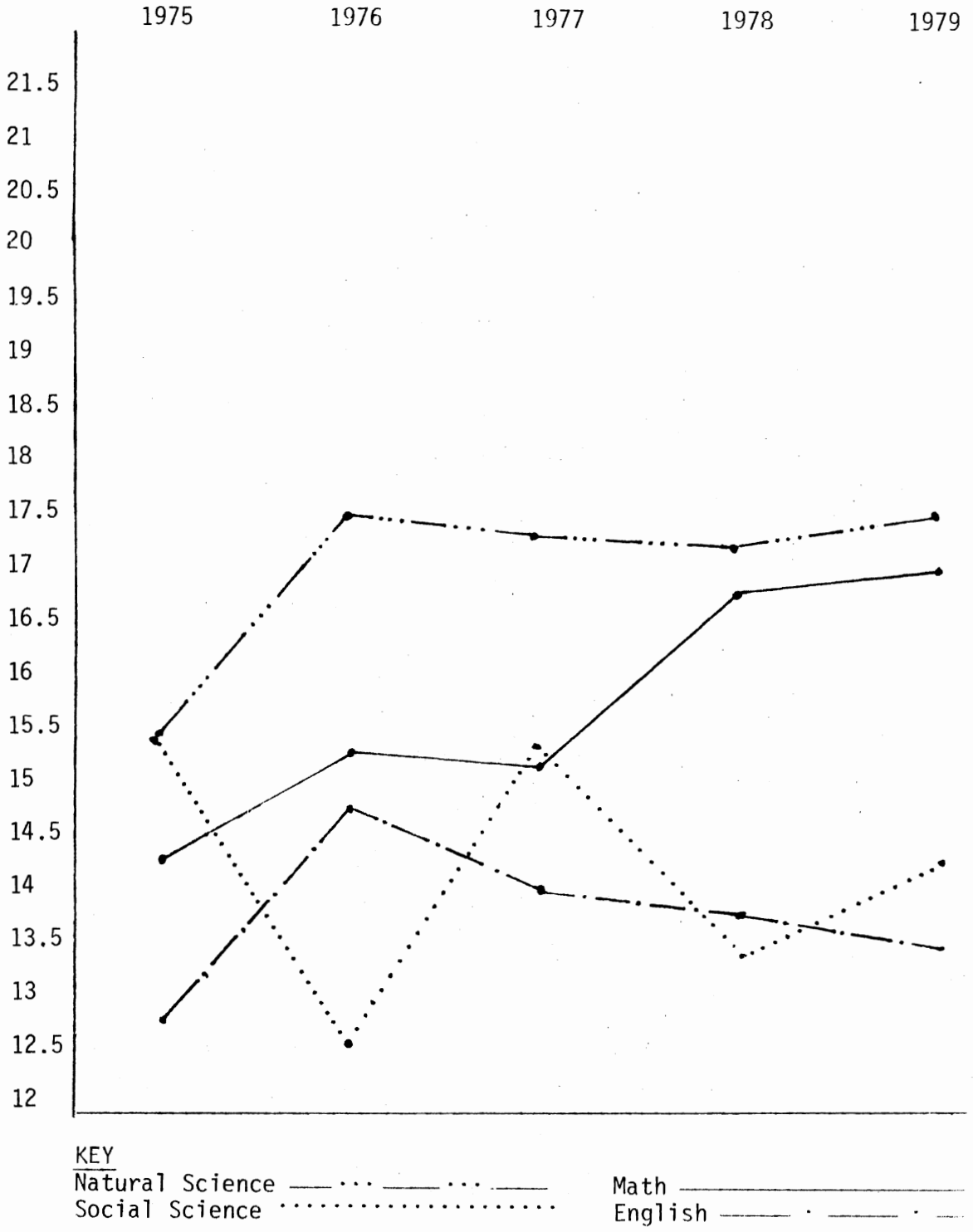


Figure 3. ACT Means of Failing Scores on SBTPE by academic Test by Year Using Combined Program Means

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary

The problem leading to this study was the continued, relatively high, failure rate of nursing graduates on the SBTPE. This failure prevents graduates from working as a Registered Nurse until such time as the examination is repeated and they are successful. This unemployment represents an economic loss to the individual, a loss of credentialized personnel in the health care system and a loss of self-esteem from the failure to the graduates.

Ex Post Facto data for the study was collected from the National League for Nursing SBTPE test results for Oklahoma Nursing graduates. These records are maintained by the Oklahoma Board of Nurse Registration and Nursing Education. Additional data was collected from each individual school that participated in the study.

The objectives of this study were to analyze background information on graduates of these eight ADN Programs to determine if:

1. Age was a factor in success/failure of first-time writers of SBTPE.

Age does appear to be a factor contributing to failure in the age group below 20 and above 56. The most successful age groups were 36-40, 41-45, and 51-55. The next most successful age group was 46-50. The least successful was the age group 21-25 which also had the largest

enrollment. This failure rate was 25 percent for males and females. The second least successful age group was 26-30 with a failure rate for males and females of 20.7 percent.

2. Sex was a factor in success/failure of first-time writers of SBTPE.

Sex does not appear to be a factor in success/failure. The percentage of males that passed the exam was 77.27 percent as compared to 77.12 percent for females. There were 132 males who took the exam as compared to 1167 females.

3. Race was a factor in success/failure of first-time writers of SBTPE.

Race does appear to be a factor in success/failure. The number of minority students taking the exam was 172 as compared to 1127 caucasian students. The overall failure of the minority students which include Blacks, Indians, and others was 58.1 percent, as compared to caucasian failure, which was 20.1 percent.

4. Secondary educational background (high school diploma or GED certificate) was a predictor in success/failure of first-time writers of SBTPE.

GED certificate holders had a lower failure rate than high school graduates. The number of GED male (11) and female (132) students was 143 with a failure rate of 16 percent as compared to male (121) and female (1035) high school graduates totaling 1156 with a failure rate of 23.7 percent.

5. ACT scores were a factor of success/failure of first-time writers of SBTPE.

ACT scores do not alone predict success. Within the failure ranges

there are individuals whose scores exceed those of individuals in the passing ranges.

Math -	Passing range	17.2 - 19.2
	Failing range	14.4 - 17.2
English -	Passing range	14.3 - 15.7
	Failing range	12.1 - 14.7
Natural Science -	Passing range	19. - 21.1
	Failing range	15.3 - 18.6
Social Science -	Passing range	18. - 19.8
	Failing range	12.6 - 18.6
Composite -	Passing range	17.9 - 18.8
	Failing range	13.4 - 17.3

With nursing students it would appear that natural science scores are the most significant in relation to success on SBTPE with social science scores the second most important. This does not coincide with the findings of Perez (1977).

The ACT composite mean of nursing graduates in 1979 (entering students of 1977) was 17. Using the ACT assessment state norm for 1977-1978 our collective graduates stand at the 49th percentile. For 1978 graduates (1976 entering students), the composite was 16.75 or the 44.5th percentile The 1977 graduates (1975 entering students) had a composite of 16.95 and stood at the 45th percentile.

Conclusions

The lower age group that was least successful is also at the age where maturation is still taking place. The age group 21-25 and 26-30 is normally a time of marriage, young families, the establishment of new homes and assumption of adult responsibilities. These stress factors while not a part of the study need to be considered. Matura-

tion and motivation may well be the contributing factors for success in the older students.

What may seem a very low percentage of success for minorities may not be true. Unidentified minority students may have been included in the successful caucasian group since there is no universal definition of minority. Name, complexion, finances, housing -- all factors used by many in identifying minority races (students) can lead to false conclusions. Programs with high failure rates have proportionately more identified minority nursing students.

ACT scores are measurable, however, when analyzing the mean scores for successful writers versus individual scores of students that "should fail" or "should succeed." This reinforces the findings of Mueller and Layman (1969). One must conclude that although scores are guides they should not be used alone to predict success.

There appears to be no single predictor for success using the information gathered. There are unidentified factors that appear to play a very important role. Apparently some students are able to cope with these extraneous influences better than others.

Recommendations

Not one of the programs were actually recruiting students. As a result of this study, the author would recommend that counseling of students be improved both in high school and college. High school recruitment could include counseling by nursing faculty in cooperation with Future Nurses Clubs. This would create interest as well as insuring that students were fully aware of the need for a strong academic background prior to the pursuance of a collegiate nursing

program. This would be particularly important for minority students. Collegiate counseling could include improved personal as well as academic counseling.

A final recommendation would be to study the qualifications of nursing faculty members. Faculty preparation and nursing expertise may provide the motivation that appears necessary for success.

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APPENDIX A

CORRESPONDENCE

1701 W. 4th
Stillwater, Oklahoma
November 9, 1978

Mrs. Jenell Hubbard, Executive Director
Oklahoma Board of Nurse Registration
and Nursing Education
Suite 400, Northgate Complex
4030 North Lincoln Blvd.
Oklahoma City, Oklahoma 73105

Dear Mrs. Hubbard:

I am on sabbatical leave this semester completing coursework toward my Doctorate in Education at OSU. At the conclusion of this semester I will have one three-hour course plus my dissertation remaining. At this time I am preparing my proposal to present to my committee.

I would like to request permission to use records of State Board Test Pool Examinations for the years 1974, 9175, 1976, 1977, and 1978. If permission is granted, I am planning to do an Ex-Post Facto study comparing test results of ADN students who have taken the examination as first-time writers and variables within their own Associate Degree Nursing Programs.

I will be meeting with the Directors of Associate Degree Nursing programs on Monday, November 13 to visit with them about data that I will need to get from their schools.

Would it be possible for me to meet with the Board Members of OBNR and NE to give them first-hand information about what I will need and the confidentiality of this information?

Sincerely,

(Mrs.) Delores E. Kruger, Chairman
Department of Nursing
Cameron University
2800 Gore Blvd.
Lawton, Oklahoma 73505

1701 W. 4th
Stillwater, Oklahoma 74074
November 9, 1978

Dear

I am presently enrolled full time at Oklahoma State University in Stillwater and am formulating my proposal for my dissertation.

I will be meeting with all of the Directors of the Associate Degree Nursing Programs in Oklahoma on Monday, November 13 at OSUTI in Oklahoma City. At this meeting I will explain my proposal and ask or your support and assistance.

I will be meeting with the Oklahoma Board of Nurse Registration and Nursing Education on Friday, December 1, 1978 to submit my proposal and request permission to utilize records available only in that office. I have also met with Dan Hobbs, Vice-Chancellor of the Regents for Higher Education and will also submit a copy of the proposal to him to keep him informed.

If there is particular information that I could look for while I am doing my own search, that will facilitate your program, I will be glad to include this.

I am looking forward to seeing you on Monday, November 13 at OSUTI.

Sincerely,

(Mrs.) Delores E. Kruger, Chairman
Department of Nursing
Cameron University
Lawton, Oklahoma 73505

APPENDIX B

DATA

ANALYSIS OF SBTPE SCORES

EACH PROGRAM BY YEAR

In 1975 N = 244: 41 failed (16.4%) and 203 passed (80.3%).

In 1976 N = 238: 47 failed (23.9%) and 181 passed (76.1%).

In 1977 N = 287: 70 failed (24.4%) and 217 passed (75.6%).

In 1978 N = 384: 49 failed (21.3%) and 225 passed (79.7%).

In 1979 N = 246: 70 failed (28.5%) and 176 passed (71.5%).

Total N = 1299

Breaking this down by school yields the following information:

Program #1

in 1975 N = 37 graduates: passed 36 (98%) failed 1 (2%).

in 1976 N = 36 graduates: passed 31 (86%) failed 5 (14%).

in 1977 N = 38 graduates: passed 28 (73.9%) failed 10 (26.1%).

in 1978 N = 54 graduates: passed 38 (70.1%) failed 16 (29.9%).

in 1979 N = 54 graduates: passed 38 (70.1%) failed 16 (29.9%).

Program #2

in 1975 N = 20 graduates: passed 20 (100%).

in 1976 N = 25 graduates: passed 16 (64%) failed 9 (36%).

in 1977 N = 31 graduates: passed 18 (58.1%) failed 13 (41.9%).

in 1978 N = 20 graduates: passed 16 (80%) failed 4 (20%).

in 1979 N = 19 graduates: passed 19 (100%).

Program #3

in 1975 N = 39 graduates: passed 28 (71.8%) failed 11 (18.2%).

in 1976 N = 34 graduates: passed 22 (64.7%) failed 12 (35.3%).

in 1977 N = 41 graduates; passed 25 (61%) failed 16 (39.9%).

in 1978 N = 45 graduates; passed 27 (60%) failed 18 (40%).

in 1979 N = 35 graduates: passed 23 (65.7%) failed 12 (34.3%).

Program #4

in 1975 N = 49 graduates: passed 45 (91.8%) failed 4 (9.2%).

in 1976 N = 44 graduates: passed 39 (88.5%) failed 5 (11.5%).

in 1977 N = 78 graduates: passed 65 (73.4%) failed 13 (16.6%).

in 1978 N = 82 graduates: passed 75 (91.5%) failed 7 (8.5%).

in 1979 N = 43*graduates: passed 30 (70%) failed 13 (30%).

Program #5

in 1975 N = 14 graduates: passed 7 (50%) failed 7 (50%).

in 1976 N = 21 graduates: passed 13 (62%) failed 8 (38%).

in 1977 N = 17 graduates: passed 15 (88.5%) failed 2 (11.5%).

in 1978 N = 18 graduates: passed 16 (88.8%) failed 2 (11.2%).

in 1979 N = 15 graduates: passed 11 (73.3%) failed 4 (26.7%).

Program #6

in 1975 N = 20 graduates: passed 16 (80%) failed 4 (20%).

in 1976 N = 22 graduates: passed 14 (63.6%) failed 8 (36.3%).

in 1977 N = 19 graduates: passed 18 (94.7%) failed 1 (5.3%).

in 1978 N = 18 graduates: passed 14 (77.7%) failed 4 (22.3%).

in 1979 N = 16 graduates: passed 13 (81.2%) failed 3 (18.8%).

Program #7

in 1975 N = 38 graduates: passed 29 (76.3%) failed 9 (23.7%).

in 1976 N = 33 graduates: passed 26 (78,8%) failed 7 (21.2%).

in 1977 N = 41 graduates: passed 34 (83) failed 7 (27%).

*1 class only of 2.

in 1978 N = 22 graduates: passed 17 (77%) failed 5 (23%).

in 1979 N = 40 graduates: passed 20 (50%) failed 20 (50%).

Program #8

in 1975 N = 27 graduates: passed 22 (81.4%) failed 5 (17.6%).

in 1976 N = 23 graduates: passed 20 (86.9%) failed 3 (13.1%).

in 1977 N = 22 graduates: passed 14 (63.6%) failed 8 (36.4%).

in 1978 N = 25 graduates: passed 22 (88%) failed 3 (12%).

in 1979 N = 24 graduates: passed 22 (83%) failed 2 (17%).

When comparing the programs by the total percentage of pass/fail for the five-year period the following information is unveiled:

Program #1 has had 219 graduates:	171 (78.1%)	passed
	48 (21.9%)	failed
Program #2 has had 115 graduates:	89 (77.4%)	passed
	26 (22.6%)	failed
Program #3 has had 194 graduates:	125 (64.5%)	passed
	69 (35.5%)	failed
Program #4 has had 296 graduates:	254 (85.9%)	passed
	42 (14.1%)	failed
Program #5 has had 85 graduates:	62 (73%)	passed
	23 (27%)	failed
Program #6 has had 95 graduates:	75 (79%)	passed
	20 (21%)	failed
Program #7 has had 174 graduates:	126 (72.4%)	passed
	48 (27.6%)	failed
Program #8 has had 121 graduates:	100 (82.7%)	passed
	21 (17.3%)	failed
The grand total of graduates was:	1299:	
	1002 (77.2%)	passed
	297 (22.8%)	failed

TABLE VIII

PROGRAM COMPARISON OF SUCCESS ON SBTPE BY AGE GROUP AND SEX
(TOTAL GRADUATES IN YEARS OF STUDY 1975-1979)

		Program #1		Program #2		Program #3		Program #4		Program	
		Pass	Fail	Pass	Fail	Pass	Fail	Pass	Fail	Pass	Fail
Below 20	M	0	0	0	0	0	1	1	0	0	1
	Fe	8	9	6	2	8	9	16	4	3	0
21-25	M	6	4	3	1	3	1	15	1	2	1
	Fe	61	13	33	15	38	30	81	20	21	9
26-30	M	1	3	4	0	3	1	12	2	1	1
	Fe	39	11	14	4	30	9	54	5	7	3
31-35	M	0	1	4	0	1	0	2*	0	0	0
	Fe	23*	4	9	2	14	12	25	2	10	3
36-40	M	0	0	3	0	0	0	1	0	0	0
	Fe	13*	0	3	2	16*	4	20	2	7	3
41-45	M	1	1	0	0	1	0	0	1	0	0
	Fe	10**	1	4*	0	5	1	12	2	8	1
46-50	M	0	0	0	0	1	0	2	0	0	0
	Fe	7	1	3	0	4	0	11	3	0	1
51-55	M	1*	0	0	0	0	0	0	0	0	0
	Fe	0	0	1*	0	1*	0	2*	0	2*	0
56-60	M	0	0	0	0	0	0	0	0	0	0
	Fe	1	0	2	0	0	1	0	0	1	0
Above 60	M	0	0	0	0	0	0	0	0	0	0
	Fe	0	0	0	0	0	0	0	0	0	0
N	M	9	9	14	1	9	3	33	4	3	3
N	Fe	162	39	75	25	116	66	218	38	59	20
Total M and Fe		171	48	89	26	125	69	254	42	62	23
Grand N		219		115		194		296		85	

TABLE VIII (Continued)

		Program		Program		Program		Total	
		Pass	Fail	Pass	Fail	Pass	Fail	Pass	Fail
Below 20	M	1	0	0	3	1	0	3	5
	Fe	8	2	6	7	9	1	64	34
21-25	M	5	1	4	2	2	0	42	11
	Fe	17	9	39	8	26	5	318	109
26-30	M	5	0	2	3	6	1	34	10
	Fe	11	4	28	10	16	6	99	52
31-35	M	0	0	0	0	1	0	8	1
	Fe	11	3	11	3	16	5	117	34
36-40	M	0	0	2	0	2*	0	8	0
	Fe	10	0	11	4	15	0	95	15
41-45	M	0	0	1	0	0	0	3	2
	Fe	4	1	10	4	3	1	56	11
46-50	M	0	0	0	0	0	0	3	0
	Fe	0	0	7	3	2	0	34	8
51-55	M	0	0	0	0	0	1	1	0
	Fe	3*	0	4*	0	1	1	14	1
56-60	M	0	0	0	0	0	0	0	1
	Fe	0	0	1	1	0	0	3	3
Above 60	M	0	0	0	0	0	0	0	0
	Fe	0	0	0	0	0	0	0	0
N	M	11	1	9	8	12	2	102	30
N	Fe	64	19	117	40	88	19	900	267
Total M and Fe		75	20	126	48	100	21	1002	297
Grand N		95		174		121		1299	

TABLE IX

COMPARISON OF SUCCESS ON SBTPE BY YEAR, AGE GROUP, AND SEX

Program #1		1975		1976		1977		1978		1979		Total	
		Pass	Fail	Pass	Fail	Pass	Fail	Pass	Fail	Pass	Fail	Pass	Fail
Below 20	M	0	0	0	0	0	0	0	0	0	0	0	0
	Fe	3	0	2	1	0	0	1	1	2	7	8	9
21-25	M	4	0	1	0	1	2	0	0	0	2	6	4
	Fe	12	0	11	3	11	2	16	5	11	3	61	13
26-30	M	1	1	0	0	0	0	0	0	0	2	1	3
	Fe	9	0	6	1	3	4	7	5	14	1	39	11
31-35	M	0	0	0	0	0	1	0	0	0	0	0	1
	Fe	1	0	5	0	3	0	6	3	8	1	23	4
36-40	M	0	0	0	0	0	0	0	0	0	0	0	0
	Fe	2	0	4	0	4	0	1	0	2	0	13	0
41-45	M	1	0	0	0	0	0	0	1	0	0	1	1
	Fe	2	0	0	0	5	0	2	1	1	0	10	1
46-50	M	0	0	0	0	0	0	0	0	0	0	0	0
	Fe	1	0	2	0	1	1	3	0	0	0	7	1
51-55	M	0	0	0	0	0	0	1	0	0	0	1	0
	Fe	0	0	0	0	0	0	0	0	0	0	0	0
56-60	M	0	0	0	0	0	0	0	0	0	0	0	0
	Fe	0	0	0	0	0	0	1	0	0	0	1	0
Above 60	M	0	0	0	0	0	0	0	0	0	0	0	0
	Fe	0	0	0	0	0	0	0	0	0	0	0	0
N	M	6	1	1	0	1	3	1	1	0	4	9	9
N	Fe	30	0	30	5	27	7	37	15	38	12	162	39
		36	1	31	5	28	10	38	16	38	16		
												171	48

N = 219

TABLE IX (Continued)

Program #2		1975 Pass	1975 Fail	1976 Pass	1976 Fail	1977 Pass	1977 Fail	1978 Pass	1978 Fail	1979 Pass	1979 Fail	Total Pass	Total Fail
Below 20	M	0	0	0	0	0	0	0	0	0	0	0	0
	Fe	1	0	1	0	2	2	1	0	1	0	6	2
21-25	M	1	0	1	1	1	0	0	0	0	0	3	1
	Fe	6	0	5	6	5	7	8	2	9	0	33	15
26-30	M	1	0	0	0	2	0	0	0	1	0	4	0
	Fe	5	0	3	1	0	2	2	1	4	0	14	4
31-35	M	1	0	0	0	2	0	0	0	1	0	4	0
	Fe	1	0	1	1	2	0	2	1	3	0	9	2
36-40	M	1	0	1	0	1	0	0	0	0	0	3	0
	Fe	0	0	0	0	2	2	0	0	1	0	3	2
41-45	M	0	0	0	0	0	0	0	0	0	0	0	0
	Fe	2	0	0	0	1	0	1	0	0	0	4	0
46-50	M	0	0	0	0	0	0	0	0	0	0	0	0
	Fe	0	0	2	0	1	0	0	0	0	0	3	0
51-55	M	0	0	0	0	0	0	0	0	0	0	0	0
	Fe	0	0	1	0	0	0	0	0	0	0	1	0
56-60	M	0	0	0	0	0	0	0	0	0	0	0	0
	Fe	1	0	0	0	0	0	1	0	0	0	2	0
Above 60	M	0	0	0	0	0	0	0	0	0	0	0	0
	Fe	0	0	0	0	0	0	0	0	0	0	0	0
N	M	4	0	3	1	5	0	1	0	1	0	14	1
N	Fe	16	0	13	8	13	13	15	4	18	0	75	25
		20	0	16	9	18	13	16	4	19	0		
												189	26
												N = 115	

TABLE IX (Continued)

Program #3		1975 Pass	1975 Fail	1976 Pass	1976 Fail	1977 Pass	1977 Fail	1978 Pass	1978 Fail	1979 Pass	1979 Fail	Total Pass	Total Fail
Below 20	M	0	0	0	0	0	1	0	0	0	0	0	1
	Fe	0	0	2	3	3	2	2	3	1	1	8	9
21-25	M	2	0	0	1	1	0	0	0	0	0	3	1
	Fe	7	4	8	6	7	8	8	8	8	4	38	30
26-30	M	1	0	1	0	1	0	0	0	0	0	3	1
	Fe	7	4	2	0	5	2	8	2	8	1	30	9
31-35	M	1	0	0	0	0	0	0	0	0	0	1	0
	Fe	3	3	6	2	1	2	4	3	0	2	14	12
36-40	M	0	0	0	0	0	0	0	0	0	0	0	0
	Fe	6	0	1	0	4	1	2	2	3	1	16	4
41-45	M	0	0	0	0	0	0	0	0	1	0	1	0
	Fe	0	0	1	0	2	0	2	0	0	1	5	1
46-50	M	1	0	0	0	0	0	0	0	0	0	1	0
	Fe	0	0	0	0	0	0	0	0	0	0	0	0
51-55	M	0	0	0	0	0	0	0	0	0	0	0	0
	Fe	0	0	0	0	0	0	0	0	1	0	1	0
56-60	M	0	0	0	0	0	0	0	0	0	0	0	0
	Fe	0	0	0	0	0	0	0	0	0	1	0	1
Above 60	M	0	0	0	0	0	0	0	0	0	0	0	0
	Fe	0	0	0	0	0	0	0	0	0	0	0	0
N	M	5	0	1	1	2	1	0	0	1	1	9	3
N	Fe	23	11	21	11	23	15	27	18	23	11	116	66
		28	11	22	12	24	16	27	18	24	12		
												125	69
												N = 194	

TABLE IX (Continued)

Program #4		1975		1976		1977		1978		1979		Total	
		Pass	Fail	Pass	Fail	Pass	Fail	Pass	Fail	Pass	Fail	Pass	Fail
Below 20	M	0	0	1	0	0	0	0	0	0	0	1	0
	Fe	4	0	0	0	4	2	5	1	3	1	16	4
21-25	M	2	0	4	0	3	0	3	1	3	0	15	1
	Fe	12	2	13	3	21	6	26	3	9	6	81	20
26-30	M	5	0	2	0	4	1	0	0	1	1	12	2
	Fe	7	0	9	2	18	2	19	0	1	1	54	5
31-35	M	0	0	1	0	1	0	0	0	0	0	2	0
	Fe	5	0	1	0	3	1	10	0	6	1	25	2
36-40	M	0	0	0	0	0	0	1	0	0	0	1	0
	Fe	3	0	4	0	5	0	5	0	3	2	20	2
41-45	M	0	1	0	0	0	0	0	0	0	0	0	1
	Fe	4	0	3	0	3	1	1	1	1	0	12	2
46-50	M	1	0	0	0	0	0	0	0	1	0	2	0
	Fe	2	1	1	0	2	0	4	1	2	1	11	3
51-55	M	0	0	0	0	0	0	0	0	0	0	0	0
	Fe	0	0	0	0	1	0	1	0	0	0	2	0
56-60	M	0	0	0	0	0	0	0	0	0	0	0	0
	Fe	0	0	0	0	0	0	0	0	0	0	0	0
Above 60	M	0	0	0	0	0	0	0	0	0	0	0	0
	Fe	0	0	0	0	0	0	0	0	0	0	0	0
N	M	8	1	8	0	8	1	4	1	5	1	33	4
N	Fe	37	3	31	5	57	12	71	6	25	12	218	38
		45	4	39	5	65	13	75	7	30	13		
												254	42
												N = 296	

TABLE IX (Continued)

Program #5		1975 Pass	1975 Fail	1976 Pass	1976 Fail	1977 Pass	1977 Fail	1978 Pass	1978 Fail	1979 Pass	1979 Fail	Total Pass	Total Fail
Below 20	M	0	0	0	1	0	0	0	0	0	0	0	1
	Fe	1	0	0	0	1	0	1	0	0	0	3	0
21-25	M	0	1	0	0	0	0	1	0	1	0	2	1
	Fe	1	1	4	3	8	2	4	0	4	3	21	9
26-30	M	0	1	0	0	0	0	1	0	0	0	1	1
	Fe	0	1	3	1	1	0	2	1	1	0	7	3
31-35	M	0	0	0	0	0	0	0	0	0	0	0	0
	Fe	3	1	2	2	2	0	3	0	0	0	10	3
36-40	M	0	0	0	0	0	0	0	0	0	0	0	0
	Fe	1	2	3	1	2	0	1	0	0	0	7	3
41-45	M	0	0	0	0	0	0	0	0	0	0	0	0
	Fe	1	0	1	0	1	0	1	0	4	1	8	1
46-50	M	0	0	0	0	0	0	0	0	0	0	0	0
	Fe	0	0	0	0	0	0	0	1	0	0	0	1
51-55	M	0	0	0	0	0	0	0	0	0	0	0	0
	Fe	0	0	0	0	0	0	2	0	0	0	2	0
55-60	M	0	0	0	0	0	0	0	0	0	0	0	0
	Fe	0	0	0	0	0	0	0	0	0	0	0	0
N	M	0	2	0	1	0	0	2	0	1	0	3	3
N	Fe	7	5	13	7	15	2	14	2	10	4	59	20
		7	7	13	8	15	2	16	2	11	4		
												62	23

N = 85

TABLE IX (Continued)

Program #6		1975		1976		1977		1978		1979		Total	
		Pass	Fail	Pass	Fail	Pass	Fail	Pass	Fail	Pass	Fail	Pass	Fail
Below 20	M	0	0	1	0	0	0	0	0	0	0	1	0
	Fe	1	1	2	1	4	0	0	0	1	0	8	2
21-25	M	0	0	2	0	0	1	3	0	0	0	5	1
	Fe	2	3	1	4	4	0	5	1	5	1	17	9
26-30	M	1	0	1	0	1	0	2	0	0	0	5	0
	Fe	2	0	2	3	3	0	1	0	3	1	11	4
31-35	M	0	0	0	0	0	0	0	0	0	0	0	0
	Fe	3	0	2	0	4	0	2	2	0	1	11	3
41-45	M	0	0	0	0	0	0	0	0	0	0	0	0
	Fe	1	0	0	0	2	0	0	1	1	0	4	1
46-50	M	0	0	0	0	0	0	0	0	0	0	0	0
	Fe	0	0	0	0	0	0	0	0	0	0	0	0
51-55	M	0	0	0	0	0	0	0	0	0	0	0	0
	Fe	2	0	1	0	0	0	0	0	0	0	3	0
56-60	M	0	0	0	0	0	0	0	0	0	0	0	0
	Fe	0	0	0	0	0	0	0	0	0	0	0	0
Above 60	M	0	0	0	0	0	0	0	0	0	0	0	0
	Fe	0	0	0	0	0	0	0	0	0	0	0	0
N	M	1	0	4	0	1	1	5	0	0	0	11	1
N	Fe	15	4	10	8	17	0	9	4	13	3	74	19
		16	4	14	8	18	1	14	4	13	3		
												75	20

N = 95

TABLE IX (Continued)

Program #7		1975		1976		1977		1978		1979		Total	
		Pass	Fail	Pass	Fail	Pass	Fail	Pass	Fail	Pass	Fail	Pass	Fail
Below 20	M	0	0	0	0	0	0	0	0	0	3	0	3
	Fe	1	0	1	2	2	0	1	1	1	4	6	7
21-25	M	3	0	0	0	1	1	0	1	0	0	4	2
	Fe	9	2	7	2	11	1	6	0	6	3	39	8
26-30	M	1	3	1	0	0	0	0	0	0	0	2	3
	Fe	5	3	7	2	7	3	4	1	5	1	28	10
31-35	M	0	0	0	0	0	0	0	0	0	0	0	0
	Fe	2	1	2	0	3	0	3	1	1	1	11	3
36-40	M	0	0	2	0	1	0	0	0	0	0	3	0
	Fe	2	0	2	0	2	1	1	0	3	3	10	4
41-45	m	0	0	0	0	0	0	0	0	1	0	1	0
	Fe	1	0	2	1	4	1	1	0	2	2	10	4
46-50	M	0	0	0	0	0	0	0	0	0	0	0	0
	Fe	4	0	1	0	1	0	0	1	1	2	7	3
51-55	m	0	0	0	0	0	0	0	0	0	0	0	0
	Fe	1	0	1	0	1	0	1	0	0	0	4	0
56-60	m	0	0	0	0	0	0	0	0	0	0	0	0
	Fe	0	0	0	0	1	0	0	0	0	1	1	1
Above 60	M	0	0	0	0	0	0	0	0	0	0	0	0
	Fe	0	0	0	0	0	0	0	0	0	0	0	0
N	M	4	3	3	0	2	1	0	1	1	3	8	8
N	Fe	25	6	23	7	32	6	17	4	19	17	116	40
		29	9	26	7	34	7	17	5	20	20		
												126	48

N = 174

TABLE IX (Continued)

Program #8		1975		1976		1977		1978		1979		Total	
		Pass	Fail	Pass	Fail	Pass	Fail	Pass	Fail	Pass	Fail	Pass	Fail
Below 20	M	0	0	0	0	0	0	0	0	1	0	0	0
	Fe	1	1	2	0	1	0	2	0	3	0	9	1
21-25	M	1	0	0	0	0	0	1	0	0	0	2	0
	Fe	8	2	5	1	3	1	5	0	5	1	26	5
26-30	M	0	0	3	0	0	1	1	0	2	0	6	1
	Fe	2	0	2	2	4	2	6	2	2	0	16	6
31-35	M	0	0	0	0	1	0	0	0	0	0	1	0
	Fe	4	2	3	0	2	2	2	0	5	1	16	5
36-40	M	0	0	0	0	0	0	0	0	2	0	2	0
	Fe	6	0	3	0	2	0	3	0	1	0	15	0
41-45	M	0	0	0	0	0	0	0	0	0	0	0	0
	Fe	0	0	1	0	0	1	1	0	1	0	3	1
46-50	M	0	0	0	0	0	0	0	0	0	0	0	0
	Fe	0	0	0	0	1	0	1	0	0	0	2	0
51-55	M	0	0	0	0	0	0	0	1	0	0	0	1
	Fe	0	0	1	0	0	1	0	0	0	0	1	1
56-60	M	0	0	0	0	0	0	0	0	0	0	0	0
	Fe	0	0	0	0	0	0	0	0	0	0	0	0
Above 60	M	0	0	0	0	0	0	0	0	0	0	0	0
	Fe	0	0	0	0	0	0	0	0	0	0	0	0
N	M	1	0	3	0	1	1	2	1	5	0	12	2
N	Fe	21	5	17	3	13	7	20	2	17	2	100	21
		22	5	20	3	14	8	22	3	22	2		
												100	21
												N = 121	

TABLE X

PROGRAM COMPARISON OF SUCCESS/NON SUCCESS ON SBTPE HIGH SCHOOL GRADUATES VS. GED
(TOTAL GRADUATES IN FIVE-YEAR STUDY 1975-1979)

	Program #1		Program #2		Program #3		Program #4	
	Pass	Fail	Pass	Fail	Pass	Fail	Pass	Fail
Male GED	1	2	3	0	0	0	2	0
Female GED	11	1	11	2	10	5	24	2
Male HS	8	7	11	1	9	3	31	4
Female HS	151	38	64	23	106	61	197	36
Total Male	9	9	14	1	9	3	33	4
Total Female	162	39	75	25	116	66	221	38
Total (Both sexes)	171	48	89	26	125	69	254	42
N	219		115		194		296	

TABLE X (Continued)

	Program #5		Program #6		Program #7		Program #8		Total	
	Pass	Fail	Pass	Fail	Pass	Fail	Pass	Fail	Pass	Fail
Male GED	0	0	1	0	1	0	1	0	9	2
Female GED	7	2	18	3	16	6	14	0	111	21
Male HS	3	3	10	1	9	8	11	2	92	29
Female HS	52	18	46	16	100	34	74	19	790	245
Total Male	3	3	11	1	10	8	12	2	101	31
Total Female	59	20	64	19	116	40	88	19	901	266
Total (Both sexes)	62	23	75	20	126	48	100	21	932	297
N	85		95		174		121		1299	

TABLE XI

PROGRAM COMPARISON OF SUCCESS/NON SUCCESS ON SBTPE BY RACE, SEX, AND YEAR
(TOTAL GRADUATES IN FIVE-YEAR PROGRAM 1975-1979)

		Program #1		Program #2		Program #3		Program #4	
		Pass	Fail	Pass	Fail	Pass	Fail	Pass	Fail
Indian	M	0	0	1	1	3	0	0	0
Indian	Fe	2	0	15	6	21	19	6	1
Black	M	0	1	0	0	0	0	1	0
Black	Fe	9	2	0	0	7	12	8	6
Caucasian	M	9	8	13	0	6	3	32	4
Caucasian	Fe	149	36	59	19	87	35	206	30
Other	M	0	0	0	0	0	0	0	0
Other	Fe	2	1	1	0	1	0	1	1
Total	M	9	9	14	1	9	3	33	4
Total	Fe	162	39	75	25	116	66	221	38
N (Each program)		219		115		194		296	

TABLE XI (Continued)

		Program #5		Program #6		Program #7		Program #8		Total (all programs)	
		Pass	Fail	Pass	Fail	Pass	Fail	Pass	Fail	Pass	Fail
Indian	M	0	0	0	0	0	1	0	0	4	2
Indian	Fe	4	2	3	2	3	4	3	4	57	38
Black	M	0	0	0	0	0	0	0	0	1	1
Black	Fe	0	1	1	1	0	3	0	0	25	25
Caucasian	M	3	3	11	1	10	6	12	2	96	27
Caucasian	Fe	55	17	60	16	109	33	79	14	804	200
Other	M	0	0	0	0	0	1	0	0	0	1
Other	Fe	0	0	0	0	4	0	6	1	15	3
Total	M	3	3	11	1	10	8	12	2	101	31
Total	Fe	59	20	64	19	116	40	88	19	901	226
N (Each program)		85		95		174		121		1299	

TABLE XII

COMPARISON OF SUCCESS/NON SUCCESS ON SBTPE
BY RACE, SEX, AND YEAR

Program #1		1975		1976		1977		1978		1979		Total	
		Pass	Fail	Pass	Fail	Pass	Fail	Pass	Fail	Pass	Fail	Pass	Fail
Indian	M	0	0	0	0	0	0	0	0	0	0	0	0
Indian	Fe	1	0	0	0	0	0	0	0	1	0	2	0
Black	M	0	0	0	0	0	1	0	0	0	0	0	1
Black	Fe	2	0	4	0	2	1	0	1	1	0	9	2
Caucasian	M	6	1	1	0	1	2	1	1	0	4	9	8
Caucasian	Fe	27	0	26	5	25	6	35	13	36	12	149	36
Other	M	0	0	0	0	0	0	0	0	0	0	0	0
Other	Fe	0	0	0	0	0	0	2	1	0	0	2	1
Total	M	6	1	1	0	1	3	1	1	0	4	9	9
Total	Fe	30	0	30	5	27	17	37	15	38	12	162	39
												N = 219	

TABLE XII (Continued)

Program #2		1975 Pass	1975 Fail	1976 Pass	1976 Fail	1977 Pass	1977 Fail	1978 Pass	1978 Fail	1979 Pass	1979 Fail	Total Pass	Total Fail
Indian	M	0	0	0	1	0	0	1	0	0	0	1	1
Indian	Fe	2	0	3	2	0	3	5	1	5	0	15	6
Black	M	0	0	0	0	0	0	0	0	0	0	0	0
Black	Fe	0	0	0	0	0	0	0	0	0	0	0	0
Caucasian	M	4	0	3	0	5	0	0	0	1	0	13	0
Caucasian	Fe	13	0	10	6	13	10	10	3	13	0	59	19
Other	M	0	0	0	0	0	0	0	0	0	0	0	0
Other	Fe	1	0	0	0	0	0	0	0	0	0	1	0
Total	M	4	0	3	1	5	0	1	0	1	0	14	1
Total	Fe	16	0	13	8	13	13	15	4	18	0	75	25
												N = 115	

TABLE XII (Continued)

Program #3		1975 Pass	1975 Fail	1976 Pass	1976 Fail	1977 Pass	1977 Fail	1978 Pass	1978 Fail	1979 Pass	1979 Fail	Total Pass	Total Fail
Indian	M	3	0	0	0	0	0	0	0	0	0	3	0
Indian	Fe	5	4	5	2	3	5	5	4	3	4	21	19
Black	M	0	0	0	0	0	0	0	0	0	0	0	0
Black	Fe	0	3	1	4	3	2	3	2	0	1	7	12
Caucasian	M	2	0	1	1	2	1	0	0	1	1	6	3
Causasian	Fe	18	4	15	5	16	8	19	12	19	6	87	35
Other	M	0	0	0	0	0	0	0	0	0	0	0	0
Other	Fe	0	0	0	0	1	0	0	0	0	0	1	0
Total	M	5	0	1	1	2	1	0	0	1	1	9	3
Total	Fe	23	11	21	11	23	15	27	18	22	11	116	66
													N = 194

TABLE XII (Continued)

Program #4		1975 Pass	1975 Fail	1976 Pass	1976 Fail	1977 Pass	1977 Fail	1978 Pass	1978 Fail	1979 Pass	1979 Fail	Total Pass	Total Fail
Indian	M	0	0	0	0	0	0	0	0	0	0	0	0
Indian	Fe	0	1	0	0	3	0	2	0	1	0	6	1
Black	M	0	0	0	0	0	0	1	0	0	0	1	0
Black	Fe	1	0	2	1	2	3	3	1	0	1	8	6
Caucasian	M	8	1	8	0	8	1	3	1	5	1	32	4
Caucasian	Fe	36	2	29	4	52	9	77	5	23	10	206	30
Other	M	0	0	0	0	0	0	0	0	0	0	0	0
Other	Fe	0	0	0	0	0	0	0	0	1	1	1	1
Total	M	8	1	8	0	8	1	4	1	5	1	33	4
Total	Fe	37	3	31	5	57	12	71	6	2	1	271	38
												N = 296	

TABLE XII (Continued)

Program #5		1975		1976		1977		1978		1979		Total	
		Pass	Fail	Pass	Fail	Pass	Fail	Pass	Fail	Pass	Fail	Pass	Fail
Indian	M	0	0	0	0	0	0	0	0	0	0	0	0
Indian	Fe	0	0	2	1	2	0	0	0	0	1	4	2
Black	M	0	0	0	0	0	0	0	0	0	0	0	0
Black	Fe	0	1	0	0	0	0	0	0	0	0	0	1
Caucasian	M	0	2	0	1	0	0	2	0	1	0	3	3
Caucasian	Fe	7	4	11	6	13	2	14	2	10	3	55	17
Other	M	0	0	0	0	0	0	0	0	0	0	0	0
Other	Fe	0	0	0	0	0	0	0	0	0	0	0	0
Total	M	0	2	0	1	0	0	2	0	1	0	33	3
Total	Fe	7	5	13	7	15	2	14	2	10	4	59	20
												N = 85	

TABLE XII (Continued)

Program #6		1975 Pass	1975 Fail	1976 Pass	1976 Fail	1977 Pass	1977 Fail	1978 Pass	1978 Fail	1979 Pass	1979 Fail	Total Pass	Total Fail
Indian	M	0	0	0	0	0	0	0	0	0	0	0	0
Indian	Fe	1	0	1	0	0	0	0	0	1	2	3	2
Black	M	0	0	0	0	0	0	0	0	0	0	0	0
Black	Fe	0	0	0	0	1	0	0	0	0	1	1	1
Caucasian	M	1	0	4	0	1	1	5	0	0	0	11	1
Caucasian	Fe	14	4	9	8	16	0	9	4	12	0	60	16
Other	M	0	0	0	0	0	0	0	0	0	0	0	0
Other	Fe	0	0	0	0	0	0	0	0	0	0	0	0
Total	M	1	0	4	0	1	1	5	0	0	0	11	1
Total	Fe	15	4	10	8	17	0	9	4	13	3	64	19
												N = 95	

TABLE XII (Continued)

Program #7		1975 Pass	1975 Fail	1976 Pass	1976 Fail	1977 Pass	1977 Fail	1978 Pass	1978 Fail	1979 Pass	1979 Fail	Total Pass	Total Fail
Indian	M	0	0	0	0	0	0	0	0	0	1	0	1
Indian	Fe	0	1	1	0	0	1	0	0	2	2	3	4
Black	M	0	0	0	0	0	0	0	0	0	0	0	0
Black	Fe	0	0	0	0	0	1	0	0	0	2	0	3
Caucasian	M	4	3	3	0	2	1	0	0	1	2	10	6
Caucasian	Fe	25	5	22	7	29	4	16	4	17	13	109	33
Other	M	0	0	0	0	0	0	0	1	0	0	0	1
Other	Fe	0	0	0	0	3	0	1	0	0	0	4	0
Total	M	4	3	3	0	2	1	0	1	1	3	10	8
Total	Fe	25	6	23	7	32	6	17	4	19	17	116	40
													N = 174

TABLE XII (Continued)

Program #8		1975 Pass	1975 Fail	1976 Pass	1976 Fail	1977 Pass	1977 Fail	1978 Pass	1978 Fail	1979 Pass	1979 Fail	Total Pass	Total Fail
Indian	M	0	0	0	0	0	0	0	0	0	0	0	0
Indian	Fe	2	1	1	1	0	2	0	0	0	0	3	4
Black	M	0	0	0	0	0	0	0	0	0	0	0	0
Black	Fe	0	0	0	0	0	0	0	0	0	0	0	0
Caucasian	M	1	0	3	0	1	1	2	1	5	0	12	2
Caucasian	Fe	18	4	16	2	12	4	20	2	13	2	79	14
Other	M	0	0	0	0	0	0	0	0	0	0	0	0
Other	Fe	1	0	0	0	1	1	0	0	4	0	6	1
Total	M	1	0	3	0	1	1	2	1	5	0	12	2
Total	Fe	21	5	17	3	13	7	20	2	17	2	88	19
												N = 121	

TABLE XIII

MEAN ACT SCORES OF GRADUATES TAKING THE SBTPE BY PROGRAM BY YEAR

1975

Program	Math Pass	Math Fail	English Pass	English Fail	Natural Science Pass	Natural Science Fail	Social Science Pass	Social Science Fail	Composite Pass	Composite Fail
#1	13.8		16.2		20.1	14	20.1	15	18.8	13
#2	19.9	--	16.5	--	22.6	--	20.7	--	20	--
#3	18.6	13.9	15.8	12.7	19.8	13.9	19	11.7	18.3	13.2
#4	18.7	17	17	18.5	20.2	13.5	20.8	16.5	18.1	16.5
#5	20.5	14.7	13.5	9	17.6	18.3	21.5	18	20.5	15.3
#6	17.6	12.8	14.7	13	21	16.3	16.9	16.8	17.5	14.8
#7	N O T A V A I L A B L E									
#8	20.1	16	14.1	19.4	19.4	15.8	19.4	14	18.5	14.6

TABLE XIII (Continued)

1976

Program	Math Pass	Math Fail	English Pass	English Fail	Natural Science Pass	Natural Science Fail	Social Science Pass	Social Science Fail	Composite Pass	Composite Fail
#1	15	16	13	12.5	20.1	16.8	19.1	15	17.8	15.5
#2	18.6	17.6	16.2	16.9	21.8	17.7	21.8	18.6	19.4	17.9
#3	17.4	14.7	15.1	13.1	19.6	17.1	18.3	14.1	17.9	14.8
#4	19	12	15.4	16.3	19.9	15	18.8	12.3	19.9	12
#5	16.5	16.4	13.5	13.6	19	21.4	13	17	17.5	17
#6	17.5	13.8	14.1	15.7	15	17.8	21.2	12.2	17.5	15
#7	N O T A V A I L A B L E									
#8	16.5	17	14.3	14.5	17.5	17.5	18	14	16.9	16

TABLE XIII (Continued)

1977

Program	Math		English		Natural Science		Social Science		Composite	
	Pass	Fail	Pass	Fail	Pass	Fail	Pass	Fail	Pass	Fail
#1	17.8	13.2	17.8	14.7	19.9	17.3	17.5	12.8	17.6	12.5
#2	19	16.2	17.2	11	21	17.4	18.9	13.2	19.3	14.8
#3	17.6	14.9	15.3	14.1	18.6	16.1	16.6	11	17.2	14.2
#4	18.5	14.5	15.5	11.8	19	13	18.1	13.9	18	13.3
#5	20.8	17	14.2	16	22	21	20.3	18.5	19.6	18
#6	19.5	16	15.5	26	19.8	23	17.1	24	18.1	21
#7	N O T A V A I L A B L E									
#8	20.1	13.8	14.3	11	22.8	14.4	22.1	13.4	20.2	13.4

TABLE XIII (Continued)

1978

Program	Math Pass	Math Fail	English Pass	English Fail	Natural Science Pass	Natural Science Fail	Social Science Pass	Social Science Fail	Composite Pass	Composite Fail
#1	19.5	17.3	15.8	12.1	21.8	17.3	20	14.9	19.3	15.6
#2	18	19	12.6	15	19.3	18.3	13.7	12	16	16.3
#3	19.5	16.2	14.7	13.9	21.3	15.4	18.5	12.4	18.6	14.5
#4	18.7	18	16	12.4	20.2	15	18.4	14.4	18.4	14.8
#5	17.6	14.5	11	11	18.3	17	18	10.5	16.8	13.5
#6	17.8	12.5	16.5	12	20.4	16	18.4	9.8	18.4	13
#7	N O T A V A I L A B L E									
#8	19.5	20.3	13.4	21	20	22	19.2	21	18.3	21

TABLE XIII (Continued)

1979

Program	Math Pass	Math Fail	English Pass	English Fail	Natural Science Pass	Natural Science Fail	Social Science Pass	Social Science Fail	Composite Pass	Composite Fail
#1	19.5	18.8	14.3	14.4	20.5	19.6	20	16.6	18.8	16.6
#2	22	--	16.9	--	22.6	--	20.6	--	19.9	--
#3	19.1	17.1	14.4	13.5	22	17.2	21.3	11.5	19.4	15
#4	20	18.4	16.6	16.9	19.6	16.9	18.8	16.7	18.7	17.4
#5	17.2	18.8	13.6	12	18.9	17.6	16.1	14.8	16.6	11
#6	16.7	13.7	13.3	13.7	20.8	16.7	18.5	14.3	17.5	14.7
#7	19.3	15.8	14.1	13.2	21.2	15.1	19.3	14.1	18.8	14.8
#8	19.8	17.5	17.1	10.5	22.9	20	20.6	12	20.2	15.5

VITA

Delores Ehrenberg Kruger

Candidate for the Degree of

Doctor of Education

Thesis: LIMITED VARIABLES COMPARED WITH SUCCESS/FAILURE OF ASSOCIATE DEGREE GRADUATE NURSES WHO WERE FIRST-TIME WRITERS OF THE STATE BOARD TEST POOL EXAMINATIONS

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