

Bulletin of the
University of Minnesota Hospitals
and
Minnesota Medical Foundation



Some Studies in Nursing

BULLETIN OF THE
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and
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I. SOME STUDIES IN NURSING

A. Some Studies in Nursing

Katharine J. Densford

Increasingly the nursing profession has turned to systematic study and research in order to secure the knowledge needed for maximum nursing service to the public. Reports of these studies have appeared in the professional literature. More recently (1952) the profession established an official organ, "Nursing Research", whose purposes are "To inform members of the nursing profession and allied professions of the results of scientific studies in nursing" and "to stimulate research in nursing." Members of the American Nurses' Association have contributed funds for a nation-wide study of nursing functions and a clearing house for studies in nursing has been organized under the auspices of that Association.

Universities, colleges, schools, and departments of nursing obviously carry major responsibility in this field and through the years have conducted hundreds of such studies. Evidence that the University of Minnesota School of Nursing has been aware of and willing to assume this responsibility may be seen in the many studies conducted by the faculty as a group and by individual faculty members.

A few examples of earlier studies may be cited: A Study of the Graduates of the School of Nursing; Relative Effectiveness of Two Methods of Teaching Blood Pressure to Students in Nursing (Boyle); Professional Laboratory Experience for Student Teachers in Nursing Education (Norris); continuing studies of admission and cancellation of students; Relative Effectiveness of Two Environments (The Classroom and the Treatment Room of a Surgical Hospital Ward) in Teaching Surgical Aseptic Technique to Students in Nursing (Kitchell); Polling Patient Opinions (Randall). In addition, the Committee on Research has conducted such projects as the preparation and administration of a "Freshman Opinionnaire on Career and School Selec-

tion" and "Faculty Activities Report" forms.

Then, too, many course offerings have as one of their purposes the preparation of the graduate nurse student with a background for research and in some cases they offer opportunity for actual practice in making studies. Among such courses are "The Survey in Nursing Education"; "Problems in Curriculum"; "Problems in Nursing Care"; and "Analysis of Nursing Care". These studies have often served as a basis for improvement in instruction and in nursing care of patients.

More recently graduate nurse students in the master of education program in nursing education and in the master of nursing administration program have, as a part of their field experience in nursing education or in nursing administration, made appropriate studies in the field of their choice.

Reporting to the staff today are two members of our faculty: Dr. Ruth V. Johnston, the counselor of the School, teaches courses in personnel and testing; Dr. Rena Boyle carries responsibility for student teaching in the baccalaureate nursing education program.

- - -

B. A Study of Programs Designed to Prepare Teachers of Nursing*

Rena Boyle

*This article is based upon a thesis entitled, "A Study of Programs of Professional Education for Teachers of Nursing in Nineteen Selected Universities", submitted to the graduate faculty of the University of Minnesota in January 1953 in partial fulfillment of the requirements for the degree of Doctor of Philosophy, Dr. Ruth Eckert, Advisor. An article of the same title as the thesis appeared in Nursing Research, February, 1954, pp.100-125.

Requests to the University of Minnesota for teachers of nursing each year far ex-

ceed the number of qualified applicants for these jobs. But this is not a regional problem alone. Counseling and placement offices throughout the country, besieged with requests for instructors, have found it impossible to provide the needed personnel. In addition, present teaching personnel are often poorly qualified. Thus many nursing instructors who hold an academic degree have had no specific preparation for teaching, while still others do not possess even a bachelor's degree. More than half of the university and college programs for graduate nurse students are not specifically designed to prepare nursing instructors, and little is known about similarities and differences in programs planned for this purpose. It is with this latter problem that the present investigation is primarily concerned.

Statement of Problem

It is the purpose of this present study, then, to (1) describe the behavior of the competent teacher of nursing; (2) identify those experiences which seem likely to help students acquire and demonstrate teaching competency; (3) collect and analyze data relating to current practices and attitudes in teacher preparation; (4) interpret the findings in terms of how well these provisions are designed to cultivate competency in teaching.

Selection of Schools

The nineteen participating schools were approved by the regional educational accrediting association and the National Nursing Accrediting Service, and provided programs preparing teachers for several nursing areas. The schools included in the study were Boston College, The Catholic University of America, Indiana University, New York University, Saint Louis University, San Francisco College for Women, Syracuse University, Columbia University (Teachers College), University of Buffalo, University of Colorado, University of Minnesota, University of Oregon, University of Pennsylvania, University of Pitts-

burgh, University of Texas, University of Washington, Washington University, Wayne University and Western Reserve University.

Methods Used in Collecting Data

Methods used in collecting data included four types of questionnaires completed by 19 administrators, 56 methods instructors and college supervisors, 119 supervising teachers, and 321 student teachers. This represented from a 70 per cent return for the college supervisors to a 100 per cent return for the administrative group. An attitude inventory was also completed by the teachers and prospective teachers. Visits were made to each of the nineteen schools to check on the questionnaire returns and to gather additional impressions of these programs.*

Definition of Terms

The following definitions reflect current usage and are ones prepared by national committees or defined by the writer in accord with longer statements prepared by authorities in the field.

Student teaching (Field experience in practice teaching): "The period of guided teaching when the student takes increasingly more responsibility for the work with a given group of learners over a period of consecutive weeks" (1:7)

College supervisors: College instructors who are designated to supervise the work of student teachers and to plan with the supervising teachers in the schools of nursing.

*Substantial scholarship aid from the honorary nursing society, Sigma Theta Tau, The Isabel Hampton Robb Memorial Fund, The Tozer Foundation and the Minnesota Federation of Women's Clubs, enabled the writer to visit each participating school and to secure assistance in the tabulation and statistical treatment of data.

Supervising Teachers: (Critic teacher, laboratory teacher). Teachers in either the basic nursing school of the university or in the cooperating schools, who are responsible for directing the work of student teachers.

Cooperating schools: Nursing schools -- other than the basic nursing school of the university -- which are used as fields for student teaching. (These schools may offer diploma, degree, or practical nursing programs).

Internship: A period of advanced professional study and guided teaching following the student teaching experience.

Professional education sequence: A sequence of professional courses and experiences which is designed to prepare teachers of nursing.

Statistical Treatment of Data

Comparisons made of practices within and among these nineteen schools required various statistical techniques. Comparisons between two groups were expressed in percentage terms. Differences between percentages were tested by means of the Fattu Nomograph and verified when necessary by the usual calculation. When the means of two sets of scores were compared, the t-test was used to determine the significance of any observed difference. Chi-square tests were employed in instances involving two or more frequency distributions. Analysis of variance techniques were used to test the homogeneity of groups both within and among schools, with respect to scores on the revised form of the attitude inventory.

Principal Findings

Student Teachers and Faculty

The faculty groups concerned with teacher education in nursing are academically among the best prepared teachers of nursing in the country. Thus 93 per cent of both college supervisors and supervising teachers held at least a first degree, while 91 per cent of the college supervisors and 30 per cent of the supervising teachers had earned at least a master's degree.

Student teachers, like the faculty, had been delayed in earning their first academic degree. Their mean age at the time of the study was twenty-nine and they had worked as graduate nurses an average of five years prior to returning for their work in professional education. These student teachers were, for the most part, graduates of diploma programs in nursing, and many lacked adequate preparation in the areas of public health, psychiatric, outpatient, and communicable disease nursing.

The areas attracting the largest number of student teachers were medical, surgical, and introductory nursing. Pediatric, psychiatric, and obstetric nursing enrolled the next largest groups of student teachers.

The information gathered concerning nursing experience and academic preparation of both faculty and student teachers emphasizes the need for more truly professional nursing education. It is unfortunate that general education has for the most part been delayed, so that it characteristically follows rather than precedes or parallels special education. It is also regrettable that prospective teachers so often lack specialized education in certain important nursing areas.

Curriculum Practices

Course requirements in general education constituted approximately half the credits assigned to nonprofessional education and were distributed among the social sciences, natural sciences and humanities. All schools required some work in biological science, but only six prescribed courses in the physical sciences. The range of required semester credits in the humanities was from six to thirty-eight, with the Catholic universities requiring eighteen or more of these credits in philosophy and religion.

Although fifteen of the nineteen programs required specialized study in some area of clinical nursing, only 61 per cent of the student teachers in these schools indicated that they had actually

taken such courses. Many clinical nursing courses included selected teaching activities with patients, lay groups, and fellow students, affording excellent preparation for later experiences in student teaching.

While all but one school required courses in educational psychology or psychology of learning, only seven prescribed any work in the history and philosophy of education. The average number of required semester credits in education (exclusive of nursing education) was five.

The commonly required courses in nursing education included methods, curriculum, history and philosophy of nursing education, administration, evaluation and research. The average number of required semester credits was nineteen, and the range was from ten to thirty-four.

Student teaching

There was little evidence of cooperation between schools of nursing and other university departments concerned with the preparation of teachers. Although instructors in five schools attended education faculty meetings, few faculty members participated in inter-departmental discussions of student teaching and related curriculum problems.

The separation of "methods" from student teaching was very apparent. In nine schools the instructor of methods had minimal contact with the planning, observation and evaluation of the student teachers. Methods instructors in six schools also served as the college supervisor for all student teachers, while in four schools the methods instructor worked closely with only a part of this group. Supervising teachers seldom participated in methods courses and many felt that they knew very little about the content of the course.

Orientation: The orientation of student teachers varied from school to school with respect to its length and activities. The planned orientation, whether condensed into a few days or extended over

many weeks, usually included:

1. Some explanation of the philosophy and curriculum of the basic school.
2. Tours of the hospital.
3. Orientation to the clinical division -- conferences with the supervising teachers, relating to personnel policies, patient census, student assignments, nursing care and the ward teaching program. Demonstrations of procedures, introductions to ward personnel and a tour of the divisions were also the responsibility of the supervising teacher.
4. Orientation to specific teaching activities -- explanation of the nursing course and related experiences and detailed planning of the student teachers' experiences were the supervising teacher's responsibility.

Less than half of the schools also provided some orientation to the basic student's extra-class life, including such phases as the students' residence, their student government program, and their social activities.

Length: It was difficult to determine the length of the student teaching experience. In certain schools student teaching was a part of a clinical nursing major, in others a part of a combined supervision and teaching major. However, in eighteen schools all student teaching experiences were concentrated within one quarter or one semester. In the remaining school, student teaching was a two quarter sequence.

Types of teaching activities: The activities in which student teachers engaged varied notably from school to school. Most students used discussion methods of teaching, cared for classroom equipment, used pictures, diagrams, and charts and wrote anecdotal notes regarding student behavior. Fewer demonstrated patient care, supervised classroom and ward practice or assisted basic students with nursing care studies. Students infrequently planned excursions or panels or used x-rays or specimens.

Nearly all student teachers examined

instructional materials and prepared teaching units and examination questions. While most students attended some meetings of professional organizations, few regularly attended committee or faculty meetings, participated in staff education programs, or in guiding student activity groups. Many student teachers were not permitted to examine cumulative records of basic students, though as faculty members a year later they would be expected to use such records judiciously.

Minnesota Teacher Attitude Inventory

The use of the Revised Form of the Minnesota Teacher Attitude Inventory has been largely exploratory in nature^{2,3}. Yet many interesting findings have resulted, indicating the following: (1) There is a high positive correlation between scores on the original and the Revised Form of the Minnesota Teacher Attitude Inventory, showing that the two forms measure essentially the same characteristics. (2) There is an increase in scores on both forms of the inventory from the beginning to the end of the teaching sequence. Although this gain indicates change in the measured attitudes of student teachers it must be remembered that such gains might be attributed to exposure to current educational theories and yet not be accompanied by actual change in behavior. (3) Mean scores on the Revised Form are significantly higher for the populations studied than those on the original M.T.A.I. (4) Student teachers enrolled in some university programs differ significantly in their attitudes from those enrolled in other university programs. (5) There is a significant difference between the scores of student teachers and faculty on the Revised Form of the attitude inventory, with scores for the latter (including both supervising teachers and college supervisors) substantially higher than those of the student teacher group. The scores of college supervisors are significantly higher than those of the supervising teachers. This was true in both the preliminary studies at the University of Minnesota and in the other univer-

sity schools included in the present study. The use of the attitude inventory has thus revealed a number of differences between student and teacher groups in various programs, which might not otherwise have been known. Confidence in the instrument is increased by the fact that it reflects change in teacher attitudes occurring during the student teaching sequence, that it differentiates among college supervisors, supervising teachers and student teachers, and that it shows differences in attitudes among the student teacher groups in the schools studied.

Recommendations

There is urgent need that university schools emphasize teaching as a career and indicate to students the many satisfactions inherent in teaching. Student teachers in nursing are often envied by those in other fields since they teach academically able and highly motivated students in a real life situation. Because their teaching is not limited to the classroom, they can observe evidences of the effectiveness of their teaching in the clinical practice of their students. If stress is placed on teaching as a career, teaching will become the pivotal point on which students' programs are focused. Such emphasis would necessitate:

1. The planned inclusion of professional education courses which are designed to cultivate an understanding of the role of the school in contemporary society, and the acquisition of knowledge, skills, and appreciations that the professional teacher needs.
2. Progressive experiences in guiding student learning. Early participation in teaching activities would afford students more opportunity to observe, practice, and evaluate the work of the teacher. The present practice of limiting student teaching to a single semester does not provide adequate preparation for teaching. For graduate nurse students, participation might well begin in their first year in a university program and culminate in an internship,

planned as a part of the graduate program.

3. Specialized preparation in one major field. Prospective teachers need content and skills beyond those acquired in their basic nursing programs.
4. Methods courses which are a more functional part of the student teaching program. Methods instructors should participate in planning, observing, and evaluating the work of individual student teachers, thus bringing the methods course into closer relationship to the student teaching experience.
5. A wide variety of teaching activities. Student teachers should receive a broader orientation to their coming responsibilities as faculty members.
6. Closer cooperation between faculty concerned with teacher education in nursing and other university instructors who are engaged in teacher preparation.
7. More extensive and effective use of cooperating schools.
8. Use of tests to determine the attitudes of prospective teachers toward students. The Revised Form of the Minnesota Teacher Attitude Inventory would aid in identifying those students holding authoritarian or undesirable attitudes and in determining whether these points of view change as a result of experiences in the nursing education program.
9. Inter-school conferences. Representatives of teacher education programs in nursing should meet periodically to discuss their objectives and current problems. It is not proposed that such discussion would eventuate in a single pattern of teacher education. Rather it should result in a stimulating interchange of ideas and a wealth of suggestions for planning and research.

A study such as this would have been impossible without the splendid cooperation of many individuals in each of the participating schools. Similar cooperative endeavors on a regional or national scale should result in further improvements in these programs of teacher education in nursing. Especially will this be true if continuing studies are made of these problems, and broad experiments launched to determine how prospective teachers can be best prepared for their oncoming responsibilities.

References:

1. American Association of Teachers Colleges, Committee on Standards and Surveys. School and Community Laboratory Experiences in Teacher Education. Oneonta, New York: American Association of Teachers Colleges, 1948.
 2. Cook, Walter W. "What Educational Measurement in The Education of Teachers?" Journal of Educational Psychology 41:339-347, October 1950.
 3. Cook, W. W., Leeds, C. H., and Callis, R. Manual for The Minnesota Teacher Attitude Inventory Form A. An unpublished manual, College of Education, University of Minnesota, 1950.
- * * * *
- C. A Study of the Achievement in Public Health Nursing of University of Minnesota Eighteen-Quarter and Sixteen-Quarter Basic Nursing Program Students as Measured by the American Public Health Association Student Public Health Nursing Test.

Ruth V. Johnston

In 1951-1952 when the change from an eighteen-quarter to a sixteen-quarter basic professional degree program in nursing was completely effected at the University of Minnesota there was attempt to find evidence of the relative excellence of the students in the two programs

with respect to achievement in public health nursing.

In the eighteen-quarter basic nursing program, the first five quarters were devoted primarily to courses of a general educational nature and basic nursing sciences. Included in the ten quarters in the School of Nursing were one quarter pre-clinical nursing and six weeks of public health nursing experience and classes but not preceded by formal courses in principles of public health nursing or related content. At the end of the ten quarters in the School of Nursing students elected a major in either nursing education or public health nursing and spent three quarters in preparation for this major.

In the sixteen-quarter program, six quarters are spent in courses of a general educational nature. The nursing sciences, formal courses in interviewing, preventive medicine and public health, principles of public health nursing and eight weeks of public health nursing experience are included in the ten quarters in the School of Nursing.

The last group of students, both public health nursing and nursing education majors, in the eighteen-quarter program (N28), and students in the first two classes of the sixteen-quarter program (N26)* were the subjects of this study. General aptitude was indicated by scores on the American Council on Education Psychological Examination, 1937 form. The indication of level of achievement in public health nursing was the score on the American Public Health Association Student Public Health Nursing Test.

Students in the eighteen-quarter program took the test both preceding and at the end of their last three quarters in nursing education or public health nursing.

*Not all students were able to take the test.

The APHA Student Public Health Nursing Test is a 180 multiple-choice item test. A total score with a corresponding letter grade (A, B, C, D, F) and twelve part scores -- principles of public health nursing, maternal and infant health, child health, non-communicable disease, communicable disease, venereal disease, tuberculosis, first aid, nutrition, mental health, health education, and background classified into "above average", "average", and "below average" categories -- are reported by the APHA Testing Service.

The mean ACE score of students in the sixteen-quarter program (85.5) is not significantly higher than that of students in the eighteen-quarter program (82.4). Neither is the mean ACE score of students in the 16-quarter program significantly higher than that of either group of eighteen-quarter students--nursing education (79.8), and public health nursing (84.3) majors. The mean of raw scores on the ACE for the nursing education majors is not significantly less than that of public health nursing majors. Thus any differences in performance among the groups on the APHA test cannot be attributed to differences in academic aptitude by scores on a college aptitude test.

Table 1 shows the distribution of letter grades on bases set up by the APHA, assigned to each group of students.

The range of scores on the initial test for eighteen-quarter students was less than the range of scores on the post test for eighteen-quarter students or on the test for sixteen-quarter students. Of the eighteen-quarter students, those who majored in public health nursing made the greater amount of letter grade gains. However, it is interesting to note that nursing education majors made gains on the test and that the mean raw score gain for nursing education majors was 12.8 raw score points while the mean raw score gain for public health nursing majors was 12.1 points. Since nursing education majors were lower on the initial test than public health nursing

Table 1

Distribution of Letter Grades on the APHA Test

Letter Grades	PERCENTAGE OF GROUP EARNING						Sixteen Quarter Students
	Eighteen Quarter Students			Post Test			
	Initial Test			Post Test			
	Nu.Ed.	P.H.N.	Total	Nu.Ed.	P.H.N.	Total	
A					18.2	8.7	7.7
B	8.3	6.3	7.1	25.0	36.4	30.4	38.5
C	66.7	81.2	75.0	58.3	45.4	52.2	42.3
D	16.7	12.5	14.3	16.7		8.7	11.5
F	8.3		3.6				
Total %	100.0	100.0	100.0	100.0	100.0	100.0	100.0

majors they had greater gain potential.

Applying the Chi-square test of significance to the ratings for the two groups of eighteen-quarter program students and the sixteen-quarter program students, we find that the sixteen-quarter students had significantly higher ratings than the nursing education majors on the initial test total and in five areas: maternal and infant health, non-communicable disease, tuberculosis, nutrition, and background. Of these, nutrition ratings were significant at the one per cent level, non-communicable disease and background ratings were significant at the two per cent level, and maternal and infant health and total ratings were significant at the five per cent level. The sixteen-quarter program students made significantly better ratings (significant at 5% level) than did the public health nursing majors on the maternal and infant health and background areas of the initial test. The sixteen-quarter students exceeded the nursing education students on the post test ratings in the health education area and in turn were exceeded by that group in tuberculosis nursing. (Both significant at 5% level). There were no significant differences in the ratings of the public health nursing group on the post test and the ratings of the sixteen-quarter program students.

On the non-communicable disease part in the initial testing, the public

health nursing majors had significantly better ratings (significant at the 5% level) than did the nursing education majors, but these differences were not apparent in the post test ratings.

Conclusions

1. Students in the eighteen-quarter and sixteen-quarter basic professional nursing programs
 - a. are not significantly different in academic aptitude,
 - b. are significantly different in public health nursing knowledge before the 18-quarter students start their major work in either nursing education or public health nursing,
 - c. are not significantly different at graduation time in knowledge of public health nursing content as measured by the APHA student PHN Test.
2. In the eighteen-quarter program, students majoring in public health nursing
 - a. are not significantly different in academic aptitude than are majors in nursing education;
 - b. earned higher ratings on both initial and post tests than students majoring in nursing

education,

- c. had a smaller gain potential since their initial scores were higher than those of the nursing education majors,
 - d. did not make significantly greater gains in public health nursing knowledge than did students majoring in nursing education,
 - e. all earned ratings on the total score of the APHA test of C or above.
3. The sixteen-quarter program in nursing does as well in preparing basic professional nursing students in public health nursing knowledge as did the eighteen-quarter program with the major in public health nursing.

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- D. The Value of the National League for Nursing Graduate Nurse Qualifying Examination and Education Test Battery in Predicting Success in Undergraduate Nursing Education.

Programs at the
University of Minnesota

Ruth V. Johnston

Undergraduate nursing education programs offered by the University of Minnesota for graduate nurses all have nursing education as a major. A minor, which is optional, may be elected in any of the following areas: ward administration, science teaching, child development, clinical nursing -- medical, surgical, obstetric, pediatric, operating room, tuberculosis, psychiatric, rural. These programs are designed to prepare head nurses, supervisors and teachers of nursing.

Determination of eligibility for admission to the nursing education programs is based on the pattern of the total data submitted by the applicant.

Since college prediction studies indicate that previous grades in college work, especially that taken recently, provide the best predictive measure of what a person will do in the future, considerable weight is given to this information for those applicants who have had college work. For those who have not earned any college credits, more weight is given to School of Nursing course grades than to grades in clinical nursing practice since Boyle¹ found that the former had higher predictive value than the latter.

Previous to admission, some applicants take the American Council on Education Psychological Examination (ACE). The form used at present is the 1947 Form; up to 1949 the 1937 Form was used.

All students admitted to the College of Education take the Miller Analogies Test and the Cooperative English Reading C₂R Test. Two forms of the Miller Analogies Test are given - Form B to freshmen and Form A to those who enter the College with advanced standing.

All students majoring in nursing education take the National League for Nursing Graduate Nurse Qualifying Examination (GNQE) either just previous to or after entering the University of Minnesota. The items in this examination are multiple-choice items based on nursing situations covering six clinical areas -- communicable disease nursing, maternity nursing, medical nursing, nursing of children, psychiatric nursing, and surgical nursing. The norm group on each part of the test is composed of between 972 and 1131 graduate nurses enrolled in programs beyond basic professional nursing in 15-20 colleges and universities throughout the United States.

One hundred sixty-six graduate nurses admitted to University of Minnesota undergraduate programs in nursing education from 1948-1951 were subjects of this study to determine the value of the National League for Nursing (NLN) Graduate Nurse Qualifying Examination, the Miller Analogies Test (Form A), and the Cooperative English Reading C₂R Test in predicting academic success as indicated by the honor point ratio at the end of the first quar-

ter and at the end of the first three quarters in the nursing education programs. The ACE was not included since not all students take this.

Since the point in the nursing education program at which a student enters, the courses she has had previous to admission, and her educational goal determine her pattern of courses taken in the first three quarters at the University of Minnesota, the number of students earning credits in courses of a general educational nature, in science, in clinical nursing, and in professional education and public health courses varies.

Table 1 on page 431 shows the correlations between the predictive measures and honor point ratio (HPR): total for first quarter, total for first year, total in science courses, total in general education courses, total in clinical nursing courses, and total in professional education and public health courses, and the inter-correlations of the predictive measures.

Correlations between the Miller A, the GNQE Surgical Nursing, and the GNQE Total and all the HPR's were significantly different from zero at either the 1% or 5% levels. The correlations between GNQE Surgical Nursing and HPR's were all significantly different from zero at the 1% level.

Correlations between GNQE- Communicable Disease and the criteria measures are more consistently low than other correlations. That the parts of the GNQE correlated so low with grades in clinical nursing may be due to some extent to the small number in the group.

Since none of the first order correlations of predictive and criterion measures is high, attempts were made to increase the correlation with first quarter and first year grades through using

a combination of measures. (See Table 2 on page 432.)

For the most part the combined predictive measures correlate somewhat more highly with the 1st year HPR -- except the Miller A and Coop C₂R combination -- than with 1st quarter grades. Multiple correlations are also somewhat higher than first order correlations. Neither the first order nor the multiple correlations are high.

We may conclude that

1. None of the instruments used has much value in predicting honor point ratio for individual students in undergraduate nursing education programs at University of Minnesota.
2. Since the students admitted to the nursing education programs are selected on the basis of other criteria, it is assumed that the lower part of the range of test scores and HPR's is cut off, since presumably applicants refused admission are less able students than those admitted. Reducing the range of scores and HPR's reduces the correlation between prediction and criterion measures.
3. There is little difference in the predictive value of the instruments used
4. Ability in reading is a less important factor in grade getting in clinical nursing than in other kinds of courses.
5. The Communicable Disease Nursing part of the GNQE appears to be the poorest predictor of the parts of the GNQE and the Medical and Surgical Nursing part, the best predictors of the examination
6. The best combination of measures to predict first quarter and first year grades is Miller A, Coop C₂R and Surgical Nursing.

1. Rena Boyle. Unpublished study.

Table 1

Correlations Between Predictive Measures and Honor Point Ratio
and Inter-correlation of Predictive Measures

	N-166	N-160	N-107	N-150	N-53	N-134								
	Total HPR 1st Qtr.	Total HPR 1st Yr.	HPR Sci.	HPR _{Ed} Ginl	HPR Clinical Nsg.	NUED+ P.H. HPR	GNQE MED	GNQE SURG	GNQE MATERNITY	GNQE CHILD	GNQE COMM. DISEASE	GNQE PSY	GNQE TOTAL	COOPENG RDG C ₂ R
Miller A	xx .378	xx .344	x .201	xx .393	xx .265	x .191	.340	.464	.201	.204	.416	.286	.352	.387
GNQE MED.	xx .289	xx .385	xx .379	xx .310	xx .262	.110		.470	.640	.678	.358	.599	.814	.416
GNQE SURG.	xx .333	xx .402	xx .243	xx .299	xx .305	xx .242			.293	.331	.573	.158	.624	.502
GNQE MAT.	xx .214	xx .254	x .200	xx .284	-.060	xx .225				.771	.206	.741	.806	.411
GNQE CHILD	xx .238	xx .290	xx .314	xx .317	-.118	.136					.256	.541	.848	.255
GNQE C.D.	.133	-.196	.074	x .171	.136	xx .223						.050	.490	.308
GNQE PSY.	.150	xx .289	xx .258	xx .264	-.061	xx .263							.731	.249
GNQE TOTAL	xx .333	xx .389	xx .364	xx .398	x .171	xx .246								.437
COOP ENG. RDGC ₂ R	xx .308	xx .297	x .169	xx .341	-.076	x .166								

xx Significantly different from zero at 1% level

x Significantly different from zero at 5% level

Table 2

Multiple Correlation Between Predictive Measures and HPR

Predictive Measures	Multiple Correlative with 1st Quarter Grades	Multiple Correlation with 1st Year Grades
Medical Nursing and Surgical Nursing	.367	.459
Medical, Surgical, Maternity, Child and Psychiatric Nursing	.370	.477
Miller A and Coop C ₂ R	.417	.401
Miller A, Coop C ₂ R, Med. Nsg., Surg. Nsg.	.430	.455
Total GNQE and Miller A	.434	.447
Miller A, Med. Nsg., Surg. Nsg.	.434	.482
Miller A, Coop C ₂ R, Surg. Nsg., Psych. Nsg.	.436	.482
Total GNQE, Miller A, Coop C ₂ R	.443	.456
Miller A, Coop C ₂ R, Med. Nsg., Surg. Nsg., Psych. Nsg.	.444	.491
Miller A, Coop C ₂ R, Surg. Nsg.	.467	.517

II. MEDICAL SCHOOL NEWS

Coming Events

- April 5 Seminar on History of Medicine; "One Thousand Years of Medicine and Surgery 600-1600 A.D.;" Mr. August C. Krey, Professor of History, University of Minnesota; Todd Amphitheater, University Hospitals; 7:30 p.m.
- April 5 - 7 Continuation Course in Eye, Ear, Nose, and Throat for General Physicians
- April 8 Duluth Clinic Lecture; "The Role of the Ionic Environment in Carbohydrate Metabolism;" Dr. A. Baird Hastings, Harvard Medical School; Owre Amphitheater; 8:00 p.m.
- April 8 - 10 Continuation Course in Urology for General Physicians
- May 3 - 5 Continuation Course in Radiology for General Physicians
- May 6 E. Starr Judd Lecture; "Surgical Aspects of Splenic Disease;" Dr. Warren H. Cole, University of Illinois; Owre Amphitheater; 8:00 p.m.
- May 6 - 8 Continuation Course in Surgery for General Surgeons
- May 10 - 15 Continuation Course in Electrocardiography for General Physicians
- May 17 - 22 Continuation Course in Proctology for General Physicians

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Anatomy Building Renamed in Honor of Dr. Jackson

The Institute of Anatomy has been renamed Jackson Hall in honor of the late Clarence M. Jackson, Professor of Anatomy from 1913 to 1941. Announcement of the Board of Regents' approval of this change was made by Dean Diehl on Thursday evening, April 1, at the dinner preceding the annual Jackson Lecture. Following the announcement Dr. E. T. Bell, Professor Emeritus of Pathology, reviewed the high points of Dr. Jackson's career and the history of our Anatomy Department. The Jackson Lecture, sponsored by the Phi Beta Pi Medical Fraternity, was presented by Dr. J. Garrott Allen, Professor of Surgery, University of Chicago Medical School, who spoke on "Management of Acute Upper Gastro-Intestinal Hemorrhage."

Naming the anatomy building for Dr. Jackson constitutes a most appropriate recognition of his contributions to medical science in general and to the University of Minnesota in particular. We are proud to have Jackson Hall as one of the buildings in the medical sciences group.

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Dr. Schmid Receives NIH Fellowship

Dr. Rudi Schmid, Instructor, Department of Medicine, has been named the recipient of a special research fellowship sponsored by the National Institutes of Health. The fellowship, which carries an annual stipend of \$6,000, will begin on July 1. Dr. Schmid will spend a year with Dr. David Shemin, Professor, Department of Biochemistry, College of Physicians and Surgeons, Columbia University, carrying out fundamental studies related to the metabolism of blood-pigments and nucleic acids. We join in offering congratulations to Dr. Schmid on being awarded this important scholarship.

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III.

UNIVERSITY OF MINNESOTA MEDICAL SCHOOL

WEEKLY CALENDAR OF EVENTS

Physicians Welcome

April 5 - 10, 1954

Monday, April 5

Medical School and University Hospitals

- 9:00 - 9:50 Roentgenology-Medicine Conference, L. G. Rigler, C. J. Watson and Staff; Todd Amphitheater, U. H.
- 9:00 - 10:50 Obstetrics and Gynecology Conference; J. L. McKelvey and Staff; W-612, U. H.
- 10:00 - 12:00 Neurology Rounds; A. B. Baker and Staff; Station 50, U. H.
- 11:30 - Tumor Conference; Doctors Hitchcock, Moore, and Stenstrom; Todd Amphitheater, U. H.
- 11:30 - 12:30 Physical Medicine Seminar; Neurological Treatment; Arthur B. Quiggle; Heart Hospital Auditorium.
- 12:15 - Obstetrics and Gynecology Journal Club; Staff Dining Room, U. H.
- 1:30 - 2:30 Pediatric-Neurological Rounds; R. Jensen, A. B. Baker and Staff; U. H.
- 1:30 - 3:30 Dermatology Hospital Rounds; H. E. Michelson and Staff; Dermatology Histopathology Room, M-434, U. H.
- 4:30 - Infectious Disease Rounds; Station 43, U. H.
- 5:00 - 6:00 Physiology-Surgery Conference; Todd Amphitheater, U. H.
- 5:00 - 6:00 Urology-Roentgenology Conference; C. D. Creevy, O. J. Baggenstoss, and Staff; Eustis Amphitheater.
- *7:30 - Seminar on History of Medicine; "One Thousand Years of Medicine and Surgery, 600-1600 A.D.;" August C. Krey, Professor of History, University of Minnesota; Todd Amphitheater, U. H.

Ancker Hospital

- 8:30 - 10:00 Tuberculosis and Chest Conference; Auditorium.
- 2:00 - 3:00 Surgery Journal Club; Classroom.

Minneapolis General Hospital

- 8:30 - Pediatric Rounds; L. Arey; Stations I and J.
- 10:30 - 12:00 Medicine Rounds; Thomas Lowry; Station F.
- 11:00 - Orthopedic and Fracture Rounds; Drs. John Moe and Arthur Zierold; Sta. A
- 11:00 - Pediatric Rounds; Erling Platou; Station K.
- 12:30 - Surgery Grand Rounds; Dr. Zierold; Station E.
- 1:30 - 2:30 Tuberculosis Conference; J. A. Myers; Station M.
- 2:00 - Pediatric Rounds; Stations I and J.

Veterans Administration Hospital

- 9:30 - Infectious Disease Rounds; Drs. Hall, Zinneman, Lubin and Sherman.
- 1:30 - Cardiac Conference; Drs. Berman, Smith, Hoseth, and Wexler; Conference Room, Bldg. I.; Rounds immediately following conference.

Tuesday, April 6

Medical School and University Hospitals

- 9:00 - 9:50 Roentgenology-Pediatric Conference; L. G. Rigler, I. McQuarrie and Staff; Eustis Amphitheater, U. H.
- 12:30 - 1:20 Pathology Conference; Autopsies; J. R. Dawson and Staff; 102 I. A.
- 12:30 - Bacteriology Seminar; The Cytopathogenic Effect of Coxsackie Viruses in Human Epithelial Cell Cultures; Richard Crowell; The Comparative Assay of Antigens by Complement Fixation; John D. Ross; Cytologic Effects in Vitro of Epitheliotropic and Encephalitogenic Viruses on Human Epithelial Cells, Strain HeLa; William F. Scherer; 214 Millard Hall.
- 3:30 - Pediatric Seminar; Diaphragmatic Hernia in Infancy; E. Dale Cumming; Sixth Floor West, U. H.
- 3:30 - Biophysics-General Physiology Seminar; Rashevsky's and Culbertson's Views on Boolean Algebra and Logical Networks; Roy Jacobs; 323 Zoology.
- 4:00 - 5:00 Pediatric Rounds on Wards; I. McQuarrie and Staff; U. H.
- 4:30 - 5:30 Clinical-Medical-Pathological Conference; Todd Amphitheater, U. H.
- 5:00 - 6:00 X-ray Conference; Presentation of Cases from Veterans Hospital; Drs. Jorgens, Tucker, et al; Eustis Amphitheater, U. H.

Ancker Hospital

- 9:00 - 10:00 Medical X-ray Conference; Auditorium.

Minneapolis General Hospital

- 9:30 - Pediatric Contagion Rounds; Elizabeth Lowry; Station K.
- 10:00 - Psychiatry Grand Rounds; R. W. Anderson; Station H.
- 11:30 - 12:30 Neurology-Neurosurgery Conference; Classroom, Station M.
- 12:30 - 2:30 Dermatology Rounds on Clinic; Carl W. Laymon and Staff.
- 12:30 - ECG Conference; Boyd Thomes and Staff; 302 Harrington Hall.
- 1:00 - Tumor Clinic; Drs. Eder, Coe, and Lipschultz; Classroom.
- 3:00 - 5:00 Pediatric Psychiatry Conference; Jack Wallinga; Classroom, Station I.

Veterans Administration Hospital

- 7:30 - Anesthesiology Conference; Conference Room, Bldg. I.
- 8:45 - Surgery Journal Club; Conference Room, Bldg. I.
- 9:30 - Surgery-Pathology Conference; Conference Room, Bldg. I.
- 10:30 - Surgery-Tumor Conference; L. J. Hay, J. Jorgens and Donn Mosser; Conference Room, Bldg. I.
- 1:00 - Review of Pathology, Pulmonary Tuberculosis; Conference Room, Bldg. I.
- 1:30 - Combined Medical-Surgical Chest Conference; Conference Room, Bldg. I.
- 2:00 - 2:50 Dermatology and Syphilology Conference; H. E. Michelson and Staff; Bldg. III.
- 4:00 - Thoracic Surgery Problems; Conference Room, Bldg. I.

Wednesday, April 7

Medical School and University Hospitals

- 8:00 - 9:00 Roetgenology-Surgical-Pathological Conference; Paul Lober and L. C. Rigler; Todd Amphitheater, U. H.
- 11:00 - 12:00 Pathology-Medicine-Surgery-Pediatrics Conference; Todd Amphitheater, U. H.
- 12:30 - 1:30 Physiology 114B -- Transport Seminar; Nathan Lifson and M. B. Visscher; 214 Millard Hall.
- 1:00 - 2:00 Dermatology Clinical Seminar; F. W. Lynch; 300 North Clinic.
- 1:30 - 3:00 Pediatric Allergy Clinic; Albert V. Stoesser and Lloyd Nelson; W-211, U. H.
- 3:30 - 4:30 Dermatology Pharmacology Seminar; J. D. Krafchuk; 3rd Floor Conference Room, Heart Hospital.
- 4:30 - 5:50 Dermatology Infectious Disease Seminar; J. D. Krafchuk; 3rd Floor Conference Room, Heart Hospital.
- 5:00 - 5:50 Urology-Pathological Conference; C. D. Creevy and Staff; Eustis Amphitheater, U. H.
- 5:00 - 6:00 Residents' Lecutre; Subject to be announced; Kenath Sponsel; Todd Amphitheater, U. H.
- 5:30 - 7:30 Dermatology Journal Club and Discussion Group; Hospital Dining Room.
- 7:30 - 9:30 Dermatology Pathology Seminar; Review of Interesting Slides of the Week; Robert W. Goltz; Todd Amphitheater, U. H.

Ancker Hospital

- 8:30 - 9:30 Clinico-Pathological Conference; Auditorium.
- 12:30 - 1:30 Medical Journal Club; Library.

Minneapolis General Hospital

- 9:30 - Pediatric Rounds; Richard Raile; Station J.
- 10:30 - 12:00 Medicine Rounds; Thomas Lowry and Staff; Station D.
- 10:30 - Pediatric Seminar; Arnold Anderson; Classroom, Station I.
- 12:00 - Surgery Seminar; Arthur Zierold; Classroom.
- 12:30 - Pediatric Staff Meeting; Classroom, Station I.
- 1:30 - Pediatric Rounds; Erling Platou; Classroom, Station I.

Veterans Administration Hospital

- 8:30 - 10:00 Orthopedic X-ray Conference; E. T. Evans and Staff; Surgical Conference Room, Bldg. 43.
- 8:30 - 12:00 Neurology Rehabilitation and Case Conference; A. B. Baker.
- 9:00 - Gastro-Intestinal Rounds; Drs. Wilson, Zieve, Hay, Brakel, Nesbitt and O'Leary.
- 11:00 - Gastreterology Conference; Conference Room, Bldg. I.
- 12:30 - Medical Journal Club; Doctors' Dining Room.
- 12:30 - X-ray Conference; J. Jorgens; Conference Room, Bldg. I.

Wednesday, April 7, (Cont.)

Veterans Administration Hospital (Cont.)

- 1:30 - 3:00 Metabolic Disease Conference; Drs. Flink, Schultz and Brown.
7:00 - Lectures in Basic Science of Orthopedics, Conference Room, Bldg. I.

Thursday, April 8

Medical School and University Hospitals

- 9:00 - 11:50 Medicine Ward Rounds; C. J. Watson and Staff; E-221, U. H.
11:00 - 12:00 Cancer Clinic, K. Stenstrom, A. Kremen and B. Zimmermann; Todd Amphitheater, U. H.
12:00 - 1:00 Medical Journal Club; Obesity; Bob Geist; 116 Millard Hall.
12:30 - Physiological Chemistry Seminar; Liver vs. Extrahepatic Tissues in Phospholipid Synthesis; E. Gray; 214 Millard Hall.
1:30 - 4:00 Cardiology X-ray Conference; Heart Hospital Theatre.
5:00 - 6:00 Radiology Seminar; Clinical Localization of Neurological Lesions; A. B. Baker; Eustis Amphitheater U. H.
*8:00 - Duluth Clinic Lecture; "Role of Ionic Environment in Carbohydrate Metabolism; Dr. A. Baird Hastings, Harvard Medical School; Owre Amphitheater.

Ancker Hospital

- 8:00 - 10:00 Medical Grand Rounds; Auditorium.

Minneapolis General Hospital

- 9:30 - Neurology Rounds; Heinz Bruhl; Station I.
9:30 - Pediatric Contagion Rounds; Elizabeth Lowry; Station K.
10:00 - Psychiatry Grand Rounds; R. W. Anderson and Staff; Station H.
11:30 - 12:30 Clinical Pathological Conference; John I. Coe; Classroom.
12:30 - 2:30 Dermatology Rounds and Clinic; Carl W. Laymon and Staff.
1:00 - Fracture - X-ray Conference; Drs. Zierold and Moe; Classroom.
1:00 - House Staff Conference; Station I.

Veterans Administration Hospital

- 8:00 - Surgery Grand Rounds; Conference Room, Bldg. I.
8:00 - Surgery Ward Rounds; Lyle Hay and Staff; Ward 11.
8:30 - Hematology Rounds; Drs. Hagen and Fifer.
11:00 - Surgery-Roentgen Conference; J. Jorgens; Conference Room, Bldg. I.
1:30 - 4:30 Infectious Disease Conference and Rounds; Wesley W. Spink; Conference Room, Bldg. I.

Friday, April 9

Medical School and University Hospitals

- 8:00 - 10:00 Neurology Grand Rounds; A. B. Baker and Staff; Station 50, U. H.
9:00 - 9:50 Medicine Grand Rounds; C. J. Watson and Staff; Todd Amphitheater, U.H.

Friday, April 9, (Cont.)

Medical School and University Hospitals (Cont.)

- 10:30 - 11:50 Medicine Rounds; C. J. Watson and Staff; Todd Amphitheater, U. H.
- 10:30 - 1:50 Otolaryngology Case Studies; L. R. Boies and Staff; Out-Patient Department, U. H.
- 11:00 - 12:00 Vascular Rounds; Davitt Felder and Staff Members from the Departments of Medicine, Surgery, Physical Medicine, and Dermatology; Eustis Amphitheater, U. H.
- 11:45 - 12:50 University of Minnesota Hospitals Staff Meeting; Surgical Injuries of the Ureters; C. D. Creevy; Powell Hall Amphitheater.
- 1:00 - 2:50 Neurosurgery-Roentgenology Conference; W. T. Peyton, Harold O. Peterson and Staff; Todd Amphitheater, U. H.
- 1:30 - 2:30 Dermatology Grand Rounds; Presentation of Cases from Grouped Hospitals (University, Ancker, General and Veterans) and Private Offices; H. E. Michelson and Staff; Eustis Amphitheater, U. H.
- 2:30 - 4:00 Dermatology Hospital Rounds; H. E. Michelson and Staff; Begin at Dermatology Histopathology Room, M-434, U. H.
- 3:00 - 4:00 Neuropathological Conference; F. Tichy; Todd Amphitheater, U. H.
- 3:30 - 4:30 Dermatology-Physiology Seminar; J. D. Krafchuk; 3rd Floor Conference Room, Heart Hospital.
- 4:00 - 5:00 124 Advanced Neurophysiology Lecture; Werner Koella and Ernst Gellhorn; 111 Owre Hall.
- 4:30 - 5:20 Ophthalmology Ward Rounds; Erling W. Hanson and Staff; E-534, U. H.
- 5:00 - Urology Seminar and X-ray Conference; Eustis Amphitheater, U. H.

Ancker Hospital

- 1:00 - 3:00 Pathology-Surgery Conference; Auditorium.

Minneapolis General Hospital

- 9:30 - Pediatric Rounds; Richard Raile; Station J.
- 10:30 - Pediatric Surgical Conference; Oswald Wyatt, Tague Chisholm, and B. Spencer; Classroom, Station I.
- 12:00 - Surgery-Pathology Conference; Dr. Zierold, Dr. Coe; Classroom.
- 1:00 - 3:00 Clinical-Medical Conference; Thomas Lowry; Classroom, Station M.
- 1:15 - Pediatric X-ray Conference; Oscar Lipschultz; Classroom, Main Bldg.
- 2:00 - Pediatric Rounds; Station I and J.

Veterans Administration Hospital

- 10:30 - 11:20 Medicine Grand Rounds; Conference Room, Bldg. I.
- 1:00 - Chest Pathology Follow-Up Conference; E. T. Bell; Conference Room, Bldg. I.

Friday, April 9, (Cont.)

Veterans Administration Hospital (Cont.)

2:00 - Clinicopathologic Conference; Conference Room, Bldg. I.

Saturday, April 10

Medical School and University Hospitals

7:45 - 8:50 Orthopedic X-ray Conference; W. H. Cole and Staff; M-109, U. H.

9:00 - 10:30 Pediatric Grand Rounds; Eustis Amphitheater, U. H.

9:00 - 11:50 Medicine Ward Rounds; C. J. Watson and Staff; Heart Hospital Amphitheater.

9:15 - 10:00 Surgery-Roentgenology Conference; L. G. Rigler, J. Friedman, Owen H. Wangenstein and Staff; Todd Amphitheater, U. H.

10:00 - 11:30 Surgery Conference; Todd Amphitheater, U. H.

10:00 - 12:50 Obstetrics and Gynecology Grand Rounds; J. L. McKelvey and Staff, Station 44, U. H.

Ancker Hospital

8:30 - 9:30 Surgery Conference; Auditorium.

Minneapolis General Hospital

8:00 - Urology Staff Conference; T. H. Sweetser; Main Classroom.

9:00 - Psychiatry Grand Rounds; R. W. Anderson; Station H.

11:00 - 12:00 Medical - X-ray Conference; O. Lipschultz, Thomas Lowry and Staff; Main Classroom.

Veterans Administration Hospital

8:00 - Proctology Rounds; W. C. Bernstein and Staff; Bldg. III.

8:30 - Medical X-ray Conference; Conference Room, Bldg. I.

* Indicates special meeting. All other meetings occur regularly each week at the same time on the same day. Meeting place may vary from week to week for some conferences.