

A COMPARISON OF THE COMMUNICATION SKILLS OF PRACTISING DIPLOMA AND BACCALAUREATE STAFF NURSES

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The Canadian Nurses' Association has passed a resolution that a baccalaureate degree in nursing will be required for entry to the nursing profession beginning in the year 2000. Although strong philosophical support exists to raise the educational level of new entrants to the profession, there exist no conclusive research findings to support the belief that baccalaureate nurses provide higher quality nursing care than do diploma nurses, or indeed, are different from diploma nurses.

In Canada there are three types of educational programs that prepare university nurses: the university generic baccalaureate nursing programs, the community college diploma programs, and hospital diploma programs. The baccalaureate nurse's preparation includes a broad base of courses in the humanities, social sciences, and sciences, along with a theoretical approach to the practice and discipline of nursing. This education prepares the baccalaureate nurse to practise nursing in a wide variety of settings and to be responsible for planning care for individuals, families, and groups at all levels of health or illness. Diploma nursing, on the other hand, focuses on the technical aspects of care to the institutionalized ill individual. It is possible for diploma registered nurses to obtain a baccalaureate degree in nursing through programs that vary in length from two to four years.

Purpose of the Pilot Project

In spite of the differing levels of skill and preparation, and despite the large differences in the functions they are prepared through their education to perform, the two groups of nurses are often hired for the same positions. For example, both diploma and baccalaureate graduates function as staff nurses, team leaders, and head nurses throughout all clinical areas of a hospital.

This pilot project, therefore, was developed to investigate one aspect of nursing care: communication skills. Specifically, the purposes of the project were to determine if differences in communication skills exist between baccalaureate and diploma nurses, and if so, to determine if this would be a fruitful area for further enquiry.

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Conceptual Framework of the Study

Interpersonal skills are those skills which promote good relationships among people. Health professionals require these skills to establish, maintain, and terminate effective helping relationships with clients, and to establish and maintain collaborative relationships with each other. Elkes states, "Good interpersonal skills can be profoundly therapeutic. They enhance trust; they promote a partnership between an informed provider and an equally informed consumer. In a health care team they favor cooperation rather than wasteful overlap, and a win/win rather than a win/lose solution" (Gerrard, Boniface, & Love, 1980, p.xii).

Communication with colleagues and with clients is a major focus for nurses (Edwards & Brillhart, 1981, p.v). It is the basis of all nursing care and is "one of the primary methods used to accomplish specific and general goals with many different kinds of people" (Murray & Zentner, 1979, p.62). Communication is such an essential part of the practice of nursing that one of the four standards for nursing practice in Canada deals solely with the helping relationship: "Nursing practice requires that the helping relationship be the nature of the client-nurse interaction" (Canadian Nurses Association, 1980, p.14). In addition, the three other standards all include aspects of communication with clients and colleagues.

Gerrard et al. (1980) describe several interpersonal skills as being essential to the practice of any health professional. Among these skills are:

1. Facilitation skills, including inviting requests, responding with information, responding with action, warmth, and active listening.
2. Assertion skills, including being confrontive, saying no, making requests, expressing opinions, initiating conversation, self-disclosing, and expressing affection.

Interpersonal communication is composed of specific behavioural skills the presence or absence of which can be objectively observed. Observation of these discrete skills provides one avenue for differentiating between the practice of baccalaureate and diploma nurses.

Literature Review

Many studies have been done that attempt to differentiate between professional and technical nursing. Few have included actual behavioural measures; nor have they focused on communication as an area of study.

Gray, Murray, Roy, and Sawyer (1977) found that in a written test, baccalaureate senior students more frequently described the appropriate nursing actions as including behaviours such as teaching, eliciting information from the patient, and reflecting feelings and concerns, than did associate degree senior students.

Chamings and Teevan (1979) surveyed deans of American baccalaureate and associate degree programs. In 8 of 24 "human competencies" (including "help client deal with stress", "motivate client to solution", "collaborate with clients and colleagues"), the deans expected baccalaureate nurses to perform better; but they expected both groups to perform equally well on the dimensions of "feeling warmth, concern, and respect", "develop rapport by listening", and "evoke emotional data by listening".

Howell (1978) surveyed the directors of nursing of 86 Oregon hospitals and had them rank their perceptions of the performance of new graduates of associate degree, of diploma, and of baccalaureate programs. The directors ranked baccalaureate nurses highest on the item, "allows for open communication between self, staff, and clients". Zarrett (1980) surveyed 323 Pennsylvania directors of nursing to rate the performance of the three groups of graduates. The diploma nurses were rated significantly higher on 6 of 11 activities, including communication skills. In a survey of the perceptions of graduates of baccalaureate, associate degree, and diploma programs and of the perceptions of their supervisors, Nelson (1978) found that baccalaureate nurses perceived their communication skills to be better than those of other nurses, and that the supervisors concurred.

Beanlands and McKay (1981) observed and audiotaped nurses' interactions with one patient. The verbal responses of the nurses were classified and 52% of 123 interactions were described as "active listening". A description of the subjects was not provided. Using the Hogan Empathy Scale, Forsyth (1979) found that baccalaureate nurses achieved significantly higher levels of empathic ability than diploma nurses.

Hills and Knowles (1983) analyzed nurses' responses to 17 of the 28 situations of the Behavioral Test of Interpersonal Skills. Data about nurses' levels of empathy and respect are reported for three groups according to the types of communication practice they had in their nursing programs. Data were not analyzed according to the nurses' level of educational preparation.

In an extensive review and critique of the literature on the effects of nursing education on job effectiveness, McCloskey (1981) surveyed 30 studies from 1967 to 1981. She concluded that methodological and conceptual problems in the studies made it impossible to conclude that differences in skill or practice actually existed among nurses with different educational

backgrounds.

Hypotheses

Four hypotheses were tested:

1. That practising baccalaureate nurses will obtain higher scores than practising diploma nurses for the categories "feeling" and "invites to talk further" as measured by the Behavioral Test of Interpersonal Skills (BTIS) (© Reston Publishing).
2. That diploma nurses will receive higher scores than baccalaureate nurses on the categories of "suggests alternative solution" and "gives information" as measured by the BTIS.
3. That there will be no difference between baccalaureate and diploma nurses in non-verbal warmth (warm face, smile, warm voice tone) as measured by the BTIS.
4. That baccalaureate nurses will obtain higher scores than diploma nurses in the category "assertiveness" as measured by the BTIS.

Method

Study Sample

The pilot study sample was drawn from staff employed in an acute care hospital. A list of nurses admissible to the study was prepared by hospital personnel. With the exception for those working in psychiatry, intensive care units, and operating and recovery rooms, all baccalaureate and diploma nurses who had been employed full time by the hospital for at least one year, who were working as staff nurses, and who were graduates of Canadian nursing programs, were considered eligible. Nurses working in the aforementioned clinical areas were omitted from the sampling procedure because of the extensive or very limited opportunities for verbal interaction with their patients. The list included all eligible baccalaureate nurses (n=31) and every second diploma nurse (n=100), grouped by clinical area.

A letter introducing the researchers and inviting the potential subjects to an informational session about the study was mailed to these 131 nurses. Thirty-five nurses attended these sessions. Thirteen nurses who indicated an interest in learning about the study, but who were unable to attend the sessions, were contacted individually by the researchers.

Sixteen nurses agreed to participate in the study. Three later cancelled their videotaping appointments. The study sample was composed of seven diploma and six baccalaureate staff nurses.

Clinical areas represented were medicine, surgery, emergency, and an investigational unit.

The diploma nurses had a range of 3-13 years of nursing experience with a mean of 8.85 years. Two of the seven diploma nurses had obtained Bachelor of Arts degrees. None was enrolled in an educational program. Two had participated in non-credit courses related to communication skills.

The baccalaureate nurses had a range of 1-15 years of nursing experience since their nursing degree, with a mean of 6.5 years. Two of the baccalaureate nurses had a previous nursing diploma and the other four were generic baccalaureate graduates. At the time of the study, no baccalaureate nurses were enrolled in educational programs. Five had participated in non-credit courses related to communication skills.

Instrumentation and Data Collection Procedures

"The Behavioral Test of Interpersonal Skills for Health Professionals... is a test that can be used to assess the interpersonal/interviewing skills of any health professional student or practitioner. The test consists of 28 common patient and health professional situations which have been role-played by actors and actresses and recorded on color videotape" (Gerrard & Buzzell, 1980, p.1). Concurrent and construct validity of the tool are described in the **BTIS User's Manual**. The BTIS content analysis allows for the scoring of eleven behavioural categories.

Each subject was seated in front of a TV monitor. As the TV played back each of the recorded problem situations, subjects were required to make a verbal response to the situation as though they were interacting with a real person. There was 30 seconds in which to respond to each situation. Each subject was alone in the room and was videotaped as he/she responded to the BTIS.

Videotaping of the subjects provided a means of direct behavioural observations without the intrusion of following and observing subjects in a clinical setting. However, the BTIS does not allow for on-going dialogue between the subject and the videotaped actor.

The content of each situation is general enough to be of relevance to nurses working in any clinical situation. For example, in one situation a patient states, "I feel awful. I feel terrible. You've got to do something for me please. I feel so sick" (Gerrard & Buzzell, 1980, p.61).

Data were collected in the summer of 1983. No monetary compensation or time off work was given for participation. Written consent and personal data were obtained from each

participant at the time of videotaping.

Analysis of the Videotapes

The co-investigators established inter-rater scoring reliability through analysis of videotapes of 10 volunteers unrelated to the pilot study. Scoring was based on guidelines in the **BTIS User's Manual**. Kappa statistics of 1.00 (0.80 is acceptable) were achieved on all BTIS categories. Although only Olson scored the pilot project videotapes, inter-rater reliability was considered essential to ensure that her analysis of pilot study videotapes was accurate.

Kappa statistics of intra-rater reliability (based on initial scoring and re-scoring one week later) for Olson ranged from 0.83 to 1.00 on the 11 behavioural categories of the BTIS. A total of 110 hours of videotape analysis was done to establish rating reliability.

Analysis of the pilot videotapes was done by Olson from October to December, 1983.

Results, Exploratory Analysis, and Discussion

Each component of hypotheses 1, 2, and 4 was tested by means of a one-tailed t-test. Hypothesis 3 was tested with a two-tailed t-test. In addition, communication categories not included in the hypotheses but measured by the BTIS, were scored and differences between diploma and baccalaureate nurses were analyzed. Significance levels above .05 were rejected. Results are presented in Table 1.

Hypothesis 1 was rejected although the t-test for the category of "feeling" (any relevant reference to the speaker's feelings) was significant. There was no difference between the two groups of nurses in the category "invites to talk further". The relatively low mean score for the baccalaureate group in the "feeling" category was surprising, since it had been believed that baccalaureate education would have prepared these nurses to acknowledge the expressed feelings in most situations. The low mean scores for the category "invites to talk further" raise questions about the data collecting and/or joint problem solving skills of both groups of nurses.

Although not included in the hypotheses, a t-test was done on the category "don't feel" (attempt to suppress, or discourage expression of feelings). The result was statistically significant ($p=.01$). The diploma nurses verbalized statements to belittle or discount expressed feelings (e.g. don't worry; you shouldn't be upset; calm down) almost four times more frequently than baccalaureate nurses. This result, along with higher scores for

Table 1. Range, Mean, Standard Deviation and t-test for Diploma and Baccalaureate Staff Nurses

BTIS Category	Maximum Scores Possible	Diploma n = 7			Baccalaureate n = 6			Value of t-test (df = 11)	Level of Significance* 1 tailed 2 tailed
		Range	X̄	S.D.	Range	X̄	S.D.		
Feeling	24	2-8	4.42	2.060	3-13	7.83	4.05	1.7989	.05
Content	24	7-19	13.71	3.918	6-19	13.67	4.714	.0154	ns
Don't Feel	24	1-6	3.14	1.551	0-2	.83	0.891	2.9665	.01
Invites to Talk Further	24	0-9	4.86	3.136	1-7	4.83	1.863	.0189	ns
Suggests Alternative Solution	20	5-13	9.71	2.490	4-17	8.00	4.434	.8043	ns
Gives Information	24	15-21	19.57	1.909	13-23	18.67	3.249	.5660	ns
Warm Face	28	19-28	23.42	2.555	18-28	24.67	3.249	.7155	ns
Smile	28	3-9	6.29	2.373	5-20	10.33	5.153	1.7191	.20
Warm Voice	28	22-28	26.00	3.251	26-28	27.67	0.746	1.1800	ns
Assertiveness	16	5-14	11.14	2.747	4-15	10.67	4.109	.2260	ns
Speech errors	20	0-9	4.00	3.505	0-26	9.17	8.877	1.3070	ns

*p = .05 at t-test value of 1.796 for 1 tailed test

p = .05 at t-test value of 2.201 for 2 tailed test

"feeling", suggests a very real difference in the way that the two groups of nurses respond to the emotions expressed by others, with the baccalaureate nurses' being more skilled in identifying and stating the feelings expressed. The ability to communicate empathy promotes trust in a relationship and is one of the facilitation skills associated with positive outcomes (physical, psychological, or behavioural changes) for patients (Gerrard et al., 1980).

Hypothesis 2 was rejected, although the data suggest a trend in the direction of higher scores for diploma nurses in the category of "suggests alternative solution" (appropriate suggestions to resolve the speaker's problems). Both groups obtained notably higher mean scores in the categories of "suggests alternate solution" and "gives information" than in the category of "invites to talk further". It may be that these responses are antithetical. Since the actors on the videotape could not engage in dialogue, it is possible that the nurses felt that giving information or suggesting a solution was a more appropriate response than inviting more discussion.

Hypothesis 3 was supported. Both groups of nurses displayed approximately the same levels of non-verbal warmth, with the baccalaureate nurses' obtaining higher scores in the behavioural category "smile". This similarity in non-verbal warmth may be due to the socialization processes all nursing students and graduates experience, or it may be related to the type of people who enter nursing.

Hypothesis 4 was rejected. The scores in the category of "assertiveness" are affected by the scores in the category of "speech errors". More than 4 speech errors negate an assertiveness scores in each of the BTIS situations. The high number of speech errors made by baccalaureate nurses therefore detracts from the assertiveness score. The baccalaureate nurses were often more tentative in their responses and the speech errors (including "um") may indicate a thoughtful approach and/or a desire for accuracy in their responses. Conversely, the fewer speech errors made by diploma nurses can be interpreted as meaning greater precision and confidence in their responses.

The value of the t-test for the category of "speech errors" suggests a trend in the direction of more speech errors for baccalaureate nurses. These errors may indicate a tentativeness that is intended to convey concern, or they may indicate a lack of confidence. It is of note that the high mean score for baccalaureate nurses in this category was strongly influenced by the score (26) of one individual.

Conclusions

Generalizations from the small sample are not possible. However, the data do suggest that differences in empathy between baccalaureate and diploma nurses may exist.

Limitations of the Study

1. The small sample size may have prevented the emergence of significant findings.
2. The small sample size precluded control for variables such as age, clinical area or length of work experience.
3. Although Olson (who did the scoring) did not know any of the participants, the possibility exists that she detected cues about their educational preparation during the informational sessions.
4. The grouping of the behavioural categories in the hypotheses according to expected scores, rather than solely according to conceptual similarity, resulted in some difficulty in hypothesis testing.
5. Study findings may be delimited by the type of instrument used.

Summary

This behavioural study of communication skills indicates that real differences between baccalaureate and diploma nurses may exist. A larger study has been initiated by the authors. Achievement of the entry to practice resolution will not occur until government ministries that control educational and health funds are convinced that baccalaureate nurses provide both superior and needed services to clients. Research into the practice of diploma and baccalaureate nurses is one step in amassing the data required to demonstrate measurable differences.

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RÉSUMÉ

Comparison des aptitudes à la communication des infirmiers détenteurs d'un diplôme pratique et des infirmiers détenteurs d'un baccalauréat

Les tentatives visant à distinguer la démarche professionnelle des infirmiers détenteurs d'un diplôme de celle des infirmiers détenteurs d'un baccalauréat ont rarement été fondées sur des mesures du comportement spécifique. Dans la présente étude pilote les auteurs ont proposé de comparer les aptitudes à la communication d'infirmiers détenteurs d'un diplôme et d'infirmiers détenteurs d'un baccalauréat par le biais d'un test de comportement sur les relations interpersonnelles (Behavioral Test of Interpersonal Skills). L'analyse des données a révélé des différences significatives au niveau de la sympathie exprimée par les deux groupes d'infirmiers et de la fréquence des tentatives visant à supprimer l'expression des sentiments chez les clients. Ces observations allaient dans le sens de l'orientation différente des deux types de programmes infirmiers. Il faudra avoir recours à un échantillon plus important pour généraliser ces observations.

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