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The High Cost of Publishing

Sources and Effects of Anxiety
in Videotape Learning Experience

Identifying Student Oriented Faculty

Identification of Health Risk Factors
Among Undergraduate University Students

Une expérience d'enseignement du concept "système familial"
et de l'intervention "famille-infirmière"

Differences in Communication of Shy and Non-shy Student
Nurses in Situations with Evaluative Potential

Sources of Stress in Third Year Baccalaureate Nursing Students

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EDITORIAL
The High Cost of Publishing

You have undoubtedly noticed that the last issue of **Nursing Papers** was technically somewhat different. In our attempts to make the journal more cost effective, we started to do our own typesetting. We apologize for some of the errors that ensued, and it will take a couple of further trials before the system is more accurately in place. We ask you to bear with us as we attempt to improve and still cut costs.

At present, **Nursing Papers** operates at a significant financial loss, i.e. $20,000 - $24,000 per year. This, of course, cannot continue. In addition to paring down the cost of publication to a bare minimum we have three other alternatives. These include: 1) close down the operation completely; 2) turn the journal into an international journal published by a professional publishing house; 3) make the journal self-supporting.

In examining these alternatives, one is faced with a number of pros and cons. To stop publication of the journal means that there would be no refereed nursing journal in Canada. Considering the number of nurse scholars and scientists in this country and our past leadership role, this move would be regressive. Also, throughout North America the number of jounals is increasing, not decreasing. The reasons for this are numerous but include the fact that more research is being conducted in nursing and more nurses have important data and knowledge to share with their colleagues. That is, after all, the way knowledge grows and is disseminated. Academic nurses have little choice but to publish in these days of stringent tenure regulations and the continuing pressure for academic nursing to establish itself as a credible science. The cost of perishing is not offset by the cost of publishing. After much consultation with CAUSN members and with other nurses, the general feeling is that Canada must sustain a refereed journal for nursing research. The alternative of stopping publication is not an acceptable one.

What then of the second alternative - to place the journal in the production (not editorial) hands of a large multinational publishing house. This potential solution would indeed erase our financial burden. It would also make Canadian nursing more visible as the journal would, of necessity, become international in its distribution and publications. An international editiorial board would be established and papers would be received from all countries. The journal would also improve in its physical attractiveness as a more costly professional production would be possible. Of course, the subscription fee would increase dramatically and Canadian content would decrease equally dramatically. This alternative is not totally rejected even though those consulted generally expressed ambivalence and wished to be able to sustain a refereed Canadian journal.

The third alternative is to make **Nursing Papers** self-supporting. How could this be accomplished? First, there needs to be a critical number of subscriptions. The more copies of a journal one produces, the less expensive the operation becomes, and the more likely the subscription rates will pay the major costs of production. At present, our U.S. institutional subscriptions are increasing, but our Canadian subscription rate remain unchanged. In fact, very few Canadian university faculty members subscribe to the journal, except in Western Canada and the Maritimes where the journal is included in the regional CAUSN membership fee. Considering the journal is primarily a voice for nurse scholars and scientists, this situation is deplorable. If all nurse faculty members supported the journal, its viability would almost be ensured. Also, what about graduate students in Canadian university schools of nursing? Are they being encouraged to support our one national refereed journal? The statistics say no - only a handful of the hundreds of graduate students in Canada subscribe to this journal.

An additional source of financial support lies in advertising. However, companies are reluctant to pay for advertisements in a journal with a low distribution rate. Hence a circular argument. Obviously, the more subscribers we have, the more secure we become on all fronts. And what of the quality of the journal? Some might say, "I would subscribe if the journal portrayed a higher quality of publication." Another circular argument. Without support, both in submissions and subscriptions, no journal is likely to be successful.

Where do we go from here? We are living on borrowed time and must make a move now. This third alternative is the one most people prefer - try to make the journal self-suporting. If that is to happen, then all of you must act quickly. Find out who in your work environment does not subscribe - give them a sales pitch, give them this editorial, send names to us and we will contact people. If each of you could attract three more subscribers, we would be very encouraged, and the quality of **Nursing Papers** may be ensured in the future, with your support.

Mary Ellen Jeans

La hausse des coûts de publication

Vous avez sans doute remarqué la présentation technique quelque peu différente du dernier numéro de **Perspectives en Nursing.** C'est par souci de rentabilité que nous avons entrepris notre propre composition. Nous sollicitons votre indulgence pour certaines des erreurs qui s'y sont glissées et nous escomptons une plus grande précision après un ou deux autres essais. Faites preuve de patience tandis que nous nous améliorons pour réduire nos coûts.

A l'heure actuelle, **Perspectives en Nursing** accuse des pertes financières importantes de l'ordre de 20 000 $ à 24 000 $ par année. Cette situation bien sûr ne peut durer. En plus de réduire les coûts de publiction à leur strict minimum, trois autres options s'offrent à nous, notamment: 1) la cessation pure et simple de notre revue; 2) sa transformation en une revue internationale publiée par un maison d'édition professionnelle; 3) sa rentabilisation.

Placés devant ces options, il nous faut peser le pour et le contre de chacune d'entre elles. Si nous cessons de publier **Perspectives en Nursing,** il n'y aura plus de revue de nursing avec comité de lecture au Canada. Compte tenu du nombre d'experts et de chercheurs en sciences infirmières au Canada et du rôle dirigeant que nous avons joué dans le passé, pareille décision marquerait une régression. Par ailleurs, dans toute l'Amérique du Nord, le nombre de revues est à la hausse et non à la baisse. Les raisons de ce phénomène ne manquent pas, mais il faut citer entre autres le fait que de plus en plus de recherches se font en sciences infirmières et que de plus en plus d'infirmières ont d'importantes données et connaissances à partager avec leurs collègues. C'est après tout le meilleur moyen de diffuser le savoir. Les universitaires spécialistes du nursing n'ont d'autre choix que de publier, compte tenu des règlements extrêmement rigoureux relatifs à la permanence et des pressions constantes qui s'exercent sur le nursing universitaire pour qu'il atteigne au rang de science crédible. Le coût de l'anéantissement n'est nullement compensé par les coûts de publication. Après maintes consultations avec les membres de la CAUSN et d'autres infirmiers et infirmières, il est manifeste que le Canada doit conserver une revue consacrée aux recherches en nursing. La solution de cesser de publier est tout à fait inacceptable.

Que dire alors de la deuxième option qui consiste à confier la production de la revue (et non ses éditoriaux) à une grande maison d'édition multinationale? Cette solution éliminerait à nul doute notre fardeau financier. Elle aurait en outre l'avantage de rendre le nursing canadien plus visible dans le monde étant donné que la revue deviendrait de toute évidence internationale, aussi bien au niveau de sa distribution que de son contenu. Un conseil de rédaction international serait créé et les articles parviendraient de tous les pays. La revue subirait également des améliorations au niveau de sa présentation matérielle car une production professionnelle plus coûteuse deviendrait alors possible. Certes, les coûts d'abonnement augmenteraient considérablement et le contenu canadien diminuerait de manière tout aussi vertigineuse. Cette option n'est pas entièrement rejeté, même si les intéressés manifestent une certaine ambivalence à son égard et souhaitent conserver une revue canadienne consacrée au nursing.

La troisième option est de rentabiliser **Perspectives en Nursing.** Comment y parvenir? Pour commencer, il faut s'assurer d'un nombre important d'abonnés. Plus le tirage d'une revue est élevé,

plus ses coûts de production baissent et plus les frais d'abonnement couvrent la majeure partie des coûts de production baissent et plus les frais d'abonnemenet couvrent la majeure partie des coûts de production. A l'heure actuelle, on note une hausse du nombre d'établissements étasuniens abonnés à notre revue, ce qui nous permet de ne pas augmenter nos frais d'abonnements au Canada. En fait, très peu de professeurs d'université canadiens sont abonnés à notre revue, si ce n'est dans l'ouest du Canada et dans les Maritimes où l'abonnement à notre revue est inclus dans les droits d'adhésion régionaux à la CAUSN. Compte tenu du fait que notre revue est avant tout une tribune où infirmiers, infirmières et chercheurs peuvent s'exprimer librement, cette situation est déplorable. Si tous les professeurs de nursing s'abonnaient à la revue, sa viabilité serait pratiquement assurée. Et que dire des étudiants de deuxième et troisième cycles inscrits dans les écoles d'infirmiers et infirmières des universités canadiennes? Les incite-t-on vraiment à appuyer l'unique revue de nursing nationale avec comité de lecture? Les statistiques affirment que non et que seule une minorité des centaines d'étudiants de deuxième et troisième cycles au Canada sont abonnés à notre revue.

On trouve une autre source d'appui financier dans la publicité. Toutefois, les sociétés rechignent à placer des annonces publicitaires dans une revue qui est peu diffusée. D'où un cercle vicieux. Manifestement, plus nous avons d'abonnés et plus nous assurons nos arrières sur tous les fronts. Et que dire de la qualité de notre publication? Certains diront "je m'abonnerai le jour où cette revue sera de plus haute qualité." Autre cercle vicieux. Sans appui, que ce soit au niveau des présentations et des abonnements, aucune revue ne peut survivre.

Quel chemin emprunter dès lors? Notre existence est en sursis et il nous faut prendre une décision dès aujourd'hui. Cette troisième option, c'est-à-dire la rentabilisation de notre revue, est celle que la plupart préfèrent. Si nous voulons réussir, nous devons tous agir le plus rapidement possible. Tachez de savoir quels sont ceux de vos collègues qui ne sont pas abonnés, donnez-leur un petit coup dans le dos, faites-leur lire cet éditorial, envoyez-nous leurs noms et nous les contacterons. Si chacun d'entre vous réussit à trouver trois nouveaux abonnés, cela nous donnera l'élan nécessaire et nous pourrons alors garantir pour l'avenir une revue de qualité supérieure.

Mary Ellen Jeans

IN MEMORIAM
Dr. Sally Joy Winkler

Joy, as she was known, left a legacy to her colleagues and students. She will be remembered by them for the high level of scholarship she evidenced and expected of those with whom she worked or taught. A graduate of the University of Manitoba, Bachelor of Nursing program, the Master's of Nursing Education program at Teacher's College, Columbia University, New York, and the Ph.D. in Nursing program at Wayne State University, Michigan, she used her knowledge, skills, and ability as a practitioner, head nurse, supervisor, teacher, and researcher. Students and colleagues, already enriched by her wisdom and leadership have as one of her contributions, the Handbook for Adult Health Assessment which she developed in her doctoral work. Her wisdom in cultural factors in health care and in nursing theory will live through her publications. Perhaps her greatest legacy is the joy with which she shared these and other hard-earned honors. The world of nursing has lost a professional, a leader of stature, and a friend who will remain in the hearts of countless members of the nursing profession.

Dr. Helen Glass

Contributions to the S. J. Winkler Memorial Award can be made to the Director of Awards, Awards Office, University of Manitoba, 423 University Centre, Winnipeg, Manaitoba R3T 2N2.

SOURCES OF STRESS IN THIRD YEAR BACCALAUREATE NURSING STUDENTS

Joyce Carver . Deborah Tamlyn

Introduction

Nurse educators often question the value of videotaping experiences because they provoke anxiety in participants. Although the use of videotape to help students improve their interpersonal skills is well documented in the literature, student anxiety about being videotaped has not been well investigated. High anxiety levels observed in some students may indicate that they do not benefit from the experience, and may even be negatively affected. Fuller and Manning (1973) contended that the self-confrontation inherent in video playback has potential for help and for harm. Anxiety is a response to self-confrontation.

This is a report of the findings of a pilot test on a questionnaire designed to determine whether self-reported anxiety in videotape experiences is a predictor of learning, and whether certain characteristics of learners are major predictors of anxiety. Implications for management of anxiety and questions for further study are discussed.

Literature Review

In a review of self-confrontation by video playback in teacher education, Fuller and Manning (1973) identify stress reactions as one outcome of the intense self-focusing inherent in videotaped replay. This feedback may be perceived as threatening and have inhibitary effects. They explore characteristics of student teachers who are most likely to benefit from self-confrontation. Subject variables are addressed under attitudes about self, anxiety, body image, dogmatism, and capacity to change. They conclude that those people most likely to benefit from self-confrontation are competent individuals who view themselves positively. Poor performers who view themselves negatively seem to need a combination of feedback methods; including verbal, written, and audio or video feedback.

An experimental study of nurses by Carpenter and Kroth (1976) supports the effectiveness of videotaped role playing to teach

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communication skills. They noted that handling learner self-confrontation may be a primary determinant of outcomes.

Finley, Kim, and Mynatt (1979) discuss learner characteristics that should be considered when using videotaped feedback to teach relationship skills in nursing. Students not experiencing anxiety seemed to have a positive self-concept, and tended to benefit more from the experience. Anxieties were centered on body image, appearance on videotape, and ability to demonstrate effective use of interpersonal skills.

Several authors describe their approaches to decreasing such anxiety. Smyth (1980) states that most people "suffer a psychological jolt" from seeing themselves on videotape for the first time, and describes preparation techniques that help minimize this. He states the choice of preparation depends on assessment of the personalities involved, but he does not give criteria for assessment.

Rynerson (1980) describes the inquirer role of the teacher as the most crucial element in video playback experiences. Student participation in establishing evaluative criteria for videotape experiences helps decrease learner anxiety according to Christian and Smith (1981). Shaffer and Pfeiffer (1976) note that there is always a degree of student anxiety when they are videotaped for the first time, but that this anxiety need not escalate if a supportive climate is established and severe critical evaluation is avoided.

Purpose

Our decision to develop a questionnaire that would investigate student reactions to videotaping experiences emerged from an observed practical problem. Students expressed anxiety about being videotaped. This led some faculty members to question the value of videotaping as a learning experience, and whether videotaping could be detrimental for certain students.

We believed that the anxiety voiced by students did not inhibit learning from the experience, and we wanted an objective measure to support our impressions. We wished to verify our observations that student anxiety varied considerably throughout the experience. We also wanted to find out which students were the most anxious, and whether certain characteristics were related to this anxiety.

Method

Questionnaire

The questionnaire used (Table 1) was developed to evaluate students perceptions of their videotape experiences in relation to the variables of self-concept, self-esteem, and self-image as

identified by Finley, et al. (1979). The first item asked for a self-report of student anxiety before, during, and after the experience. This was the pilot test; there was no previous use of the instrument to establish validity or reliability.

Table 1

Feedback from Questionnaire for Videotape Experiences

	Statement	Responses Severe	Moderate	Low
1.	The word which best describes my anxiety level			
		%		
	a) immediately before	n=11 (16.9)	40 (61.5)	13 (20.0)
	b) during	3 (4.6)	42 (64.6)	19 (29.2)
	c) while viewing the videotape	2 (3.2)	23 (35.4)	13 (60.0)

		Strongly Agree	Agree	Disagree	Strongly Disagree
2.	I have learned from my video tape experience this year.	18 (27.7)	35 (53.8)	9 (13.8)	3 (4.6)
3.	I don't like to look at myself on videotape.	5 (7.7)	22 (33.8)	33 (50.8)	4 (6.2)
4.	I have high expectations of myself during videotape interview.	4 (6.2)	25 (38.5)	34 (52.3)	1(1.5)
5.	I usually feel I will do well in learning situations.	4 (6.2)	48 (73.8)	12 (18.5)	0
6.	I lack self-confidence in learning situations	2 (3.1)	14 (21.5)	46 (70.8)	3 (4.6)
7.	When reviewing my video, I am concerned with how I look.	0	28 (43.1)	32 (49.2)	5 (7.7)
8.	I am concerned about the appropriateness of what I said during my videotape.	28 (42.1)	33 (50.8)	3 (4.6)	1 (1.5)
9.	Following analysis of my videotape I feel good about my abilities.	1 (1.5)	40 (61.5)	18 (27.7)	3 (4.6)

*N=65; numbers not adding up to 65 are because students did not respond to some questions.

Respondents

Sixty-five female baccalaureate nursing students voluntarily completed the questionnaire at year-end classes, as part of the course evaluation. This sample represented 66% of the total population of students involved, and consisted of 20 students in second year, 28 in third year, and 17 in fourth year. The age range was 19-24 years.

All students had previous experience with videotaping, although variations in both frequency and involvement make exact comparisons impossible. The same theoretical model for helping relationships (Gazda, Walters, & Childers, 1977) was used with all groups. Second year students had two experiences that focused on self-awareness and on the development of empathy. Third and fourth year students were expected to use a broader range of the dimensions of the helping relationship, and to analyze their responses in greater depth. They also had two experiences each year.

In addition to the theoretical model of helping relationships used, there were a number of other similarities in the experiences of each group. None of the experiences were used for evaluation or were graded in any way, but participation was required for course completion. As well, in all experiences

- students were oriented to videotaping equipment, environment, and process;
- the same physical environment was used;
- students were given a brief profile of the client situation before the interview;
- interviews lasted approximately ten minutes;
- immediate positive feedback was given by faculty;
- students had an opportunity to view their performance and to get further feedback from faculty for analysis of their responses;
- confidentiality was assured and all videotapes were erased.

Data Analysis

Overall anxiety scores were calculated by assigning 3 points to severe anxiety, 2 points to moderate anxiety, and 1 point to low anxiety responses on Item 1. Data analyses included demographic findings and stepwise multiple regression with "total anxiety score" as the dependent variable and "pre-videotape anxiety", "videotape anxiety", and "playback anxiety" as the independent variables. Hierarchial multiple regression was done with "pre-videotape anxiety" as the dependent variable and with learner characteristic variables. Data analysis was completed using the Statistical Package for the Social Sciences (Nie, Hull, Jenkins, Stunbrenner, & Bent, 1970).

Findings

Total anxiety scores became progressively lower as the videotape experience progressed (Table 1). Over 61% had moderate anxiety just before and during videotaping, whereas 60% experienced only low anxiety during the playback sessions.

Pre-videotape anxiety was the best predictor of overall anxiety, accounting for 82% of the variance in total anxiety scores (Table 2). Severe anxiety before videotaping was reported by 11 students, but only three of these indicated that they did not learn from videotaping.

The majority of students (81.5%) reported that they had learned from videotape experiences. Slightly over 40% didn't feel comfortable viewing themselves on videotape, and about 40% had high expectations of their performance during videotaping. Approximately 18% did not feel that they usually do well in learning situations (Table 1).

Hierarchial multiple regression showed no significant correlation between pre-videotape anxiety and perceived learning from videotape experiences (Table 3). The strongest predictor variable for pre-videotape anxiety was "self-confrontation" (not wanting to look at oneself), which alone accounted for 56% of the variance (simple r) in pre-videotape anxiety scores. "Lack of confidence" had the next highest predictive ability.

The relationships between pre-videotape anxiety and all of the variables except "learning from videotape experience" were significant at below the .005 level (Table 3).

Limitations

A number of variables that are not controlled can be expected to influence questionnaire results. The sample consisted of three subgroups having different frequency and depth of exposure to videotaping. However, these subgroups are too small to make meaningful comparisons.

Variations in teacher approach are inevitable in a non-controlled study, although the same person taught both second and fourth year groups. The person interviewed by students in each group varied, as did the client situation simulated. Each group was operating from a different base of accumulated knowledge, and progressively higher level learning objectives were expected.

A more objective measurement both of anxiety and of learning outcomes is desirable. Baseline anxiety levels may vary significantly from student to student. No attempt was made to include this in the pilot study which relied on self-reported anxiety

Table 2

Stepwise Multiple Regression with Total Anxiety Score as the Dependent Variable

Variable	Multiple R
Prevideotape anxiety	0.81741
Videotape anxiety	0.91676
Playback anxiety	1.0000

Table 3

Hierarchial Multiple Regression Analysis with Prevideotape Anxiety as the Dependent Variable

Step	Variable Entered	Multiple R	Significance
1	Have learned from VT	.18160	.169
2	Don't like to look at self on VT	.55982	.000
3	Lack confidence	.56569	.000
4	Concern with appropriateness of what said during VT	.57194	.000
5	Following analysis, feel good about abilities	.58477	.000
6	Concern with how I look on VT	.58498	.001
7	High expectations of self during VT	.58501	.002
8	Self-confidence	.58881	.004

and learning. Use of the delayed recall process is a limitation in the reliability and validity of self-reported anxiety.

Discussion

The findings show that anxiety was common for the students, especially just before videotaping, but what is encouraging for educators is that anxiety did not preclude learning. Even among those students experiencing severe pre-videotape anxiety, 73% still reported that they had learned from the experience. However, as recommended by Finley et al. (1979), the experience had particular structural components, such as no assigned grade, which were designed to minimize student perceived risk.

A significant relationship was found between anxiety and being uncomfortable viewing oneself on videotape. The self-confrontational aspects of videotape experiences has been sited by others (Fuller & Manning, 1973; Finley et al., 1979) as being a strong contributor to negative feelings associated with videotaping. These aspects of videotaping may be especially threatening to those students in late adolescence or early adulthood, who are already preoccupied with their body image, sexuality, and evolving self-concept (McCandless, 1972).

Anxiety levels fluctuated during the videotape phases. They were highest just before videotaping, but they dropped considerably during the playback phase. This suggests that student preconception of videotaping is an important area for educators to address. Students who understand the objectives and process of videotaping may be less apprehensive. Instructors who have seen themselves on videotape should be able to empathize more easily with students, and help them deal with anxiety (Berger, 1970).

Only four percent of the students reported no learning despite experiencing low anxiety. The factors that impede learning in this case should be further considered. General areas to pursue include learner characteristics, teacher attitude, and educational design. An objective measurement of anxiety may also assist in better differentiation of overall anxiety.

Conclusion

This pilot test suggests that student self-reported, moderate-to-severe, pre-videotape anxiety does not inhibit learning in carefully designed videotape experiences. Faculty can expect many students to express anxiety prior to videotaping. The self-confrontational aspects of videotaped replay, and lack of self-confidence seem to be major reasons for student anxiety. This should be anticipated and managed as a normal part of the learning process. Knowledge that most students report positive learning in this situation is reassuring for educators. The tendency to abandon

anxiety provoking experiences must be avoided and attention given to the most effective design and teacher approach in this area.

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RÉSUMÉ

L'enregistrement magnétoscopique et son effet sur l'apprentissage: Les sources de l'anxiété perçues par l'étudiant

Bien que le visionnement d'enregistrements magnétoscopiques représente un outil d'apprentissage puissant, nombreux sont les professeurs de sciences infirmières qui se soucient des réactions d'anxiété qu'il suscite chez leurs étudiants. Dans le cadre de la présente étude, on a procédé à un test pilote d'un questionnaire conçu pour mesurer l'anxiété signalée par le sujet chez 65 étudiants en sciences infirmières inscrits en deuxième, troisième et quatrième année du baccalauréat; les évaluations ont été faites avant, pendant et après l'enregistrement magnétoscopique. L'anxiété signalée par les sujets atteignait son paroxysme juste avant la séance d'enregistrement, mais diminuait de manière spectaculaire tout au long de l'expérience. Une anxiété même modérée ou importante ne semblait pas gêner l'apprentissage. Le malaise causé par l'idée de se voir confronter à soi-même en regardant l'enregistrement magnétoscopique et le manque de confiance en soi de l'étudiant étaient les indices les plus sûrs de l'anxiété juste avant l'enregistrement magnétoscopique. Ces observations semblent indiquer qu'il faudrait planifier soigneusement les exercises d'enregistrement magnétoscopique et l'attitude des professeurs face aux étudiants avant l'enregistrement. Des études plus poussées sont requises si l'on veut déterminer les démarches les plus efficaces et dépister les étudiants qui ont besoin d'une intervention additionnelle pour profiter du visionnement de l'enregistrement magnétoscopique.

IDENTIFYING STUDENT-ORIENTED FACULTY

Darle Forrest

There is general agreement that excellence in teaching involves both content and process dimensions. According to Gorman (1969), content expertise refers to the teacher's knowledge and command of subject matter. Expertise in the process dimension refers to the teacher's skill in establishing working relationships with students that activate learning. While theorists and educators place different emphasis and priority on these dimensions, this research addressed the process dimension of teaching. Specifically, the purpose of the study was to establish the validity of the Teacher Perceiver Interview as an instrument to identify nursing teachers who develop rapport with students, and who activate students to become involved in the learning process. Should the Teacher Perceiver Interview have predictive value, it has potential as a useful tool in the selection and development of nursing faculty.

The process dimension of teaching, mentioned earlier, receives considerable commentary in nursing education, with the need for positive and supportive teacher-student relationships well documented in the nursing literature. In her review of student stress in nursing, McKay (1978) reports that nursing education is a stressful and anxiety-provoking experience for students, and concludes by emphasizing the need for faculty to establish positive and supportive interactions with students. Gunter (1969) also urges nursing educators to establish positive teacher-student relationships contending that "The nursing student, through this experience of an understanding relationship with faculty, may be enabled to establish an understanding relationship or therapeutic relationship with her patients" (p.242). In support of the concept that nursing is a humanistic, helping profession, the essence of which is care and caring, Watson (1981) points to the paramount importance of a learning climate in which the student experiences these conditions. Such experience is a precursor to the student's internalization of the humanist values that are basic to the profession of nursing (Benoliel, 1983; Ellis, 1970; King & Gerwig, 1981; Watson, 1981).

Focus of the Study

Positive teacher-student relationships have value, then, for the student, the client, and the profession of nursing. One problem that emerges is that of finding an objective, non-threatening, and inexpensive method whereby the orientation of nursing teachers

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toward students can be assessed. An instrument designed for this purpose, the Teacher Perceiver Interview (TPI), was developed to provide information about the teacher's relations with students, as reflected in responses to interview questions that deal with a teacher's beliefs and values, relating skills, and strategies chosen to activate learning (Selection Research, 1977). More specifically, the TPI consists of 60 structured interview questions, scored according to particular criteria, and an interview format that is standardized. While the instrument has been validated with educators in school systems, it has not been researched with nursing educators.

To determine the validity of the TPI, two criterion measures were selected: student ratings and school of nursing director ratings of the teacher. The following questions provided the focus for hypothesis development:

1. Is nursing instructor performance on the TPI related to ratings by the instructor's students and by the director of the school of nursing?

2. Is there a relationship between the ratings of directors and students for nursing instructors?

3. Is nursing instructor performance on the TPI rated differently by students and directors?

It was hypothesized that nursing instructor scores on the TPI would correlate positively and significantly with student ratings, and with director ratings of the instructors. This assumption was based on the results of ten studies conducted in various school districts in the United States that validated the TPI with student and school administrator ratings. A summary of these studies revealed an average correlation of +.37 between teacher score on the Interview and student ratings, and +.41 between teacher score and administrator ratings (Savage, 1982). It was further hypothesized, on the basis of Shillig's (1975) study, that a positive and significant relationship would occur between student and director ratings of nursing instructors.

A secondary set of questions was formulated for the purpose of investigating the relevance of particular nursing instructor characteristics to instructor performance on the TPI. The questions were the following:

I. Do nursing instructors in different clinical specialities perform differently on the TPI?

II. Do nursing instructors teaching in different year levels perform differently on the TPI?

III. Is nursing instructor age, teaching experience, nursing experience and education related to performance on the TPI?

With regard to the first question, an assumption was made that those instructors teaching in the specialty of mental health would achieve higher scores in the interview; the premise being that relationship skills are emphasized in this specialty. For the second question, it was postulated that instructors teaching in first year would score higher in the interview. The premise for this assumption was drawn from a study by O'Shea and Parsons (1979) in which findings suggested that faculty in a baccalaureate program appeared to offer a more supportive and understanding relationship to junior students than to senior students. In regard to Question III, an assumption was made that the nursing instructor's teaching experience, nursing experience, and education (each of which would probably correlate with age), would be related to the instructor's effectiveness with students and, as a result, these variables would show a positive correlation to the instructor's Interview score. There did not appear to be confirmation or rejection of this premise in the nursing literature.

Method

Sample

Forty-eight nursing instructors, randomly selected from three hospital-affiliated diploma nursing programs in Alberta, participated in the study. These instructors met the following criteria: they taught in both clinical and classroom settings, and they had taught at least twenty students in the program. They may be described as female, registered nurses, who were between the ages of 23 and 50 years, who had one to eighteen years of nursing experience, and who had one to nineteen years of teaching experience. Forty-five instructors had baccalaureate degrees, and three instructors had, as their highest level of preparation, diplomas in nursing.

Other participants in the study included 463 nursing students, representing 91 percent of the potential number of students who could complete questionnaires with regard to the 48 instructors. Also included in the study were the three school of nursing directors who completed questionnaires on each of their instructors involved in the study. All three had been in their positions for over five years.

Instruments

The Teacher Perceiver Interview consists of 60 open-ended interview questions which are divided into 12 theme categories. For each question a predictive response (as designated in the scoring key and paraphrased by the subject) is scored 1, and a nonpredictive response is scored 0. Minor adaptations were made in the TPI, 1977 edition, to reflect a nursing context. The adapted version was pilot-tested with six nursing instructors.

The reliability of the TPI has been established, with a test-retest

correlation coefficient of .95, in a sample of 30 teachers. The inter-rater reliability among trained scorers has been 85 percent. Internal consistency coefficients, based on the Kuder-Richardson formula, produced coefficients of .76 (Muller, 1978; Selection Research, 1977).

Predictive validity of the TPI has been established using, as external criteria, student and administrator ratings of the interviewed teachers. In ten studies the correlations between teacher TPI score and student ratings have ranged between +.11 and +.50, with five of the ten coefficients significant at the .05 level. Correlations between teacher TPI score and administrator ratings have ranged from +.12 to +.62 in six studies, with four of the six coefficients significant at the .05 level (Savage, 1982).

The student and director questionnaires, virtually identical, contain items of teacher behaviour that correspond to the 12 themes of the TPI (Selection Research, 1977). The student questionnaire, composed of 40 items that were constructed on a five-point rating scale, allows possible scores between 40 and 200. The director questionnaire, adapted from the first 24 items of the student questionnaire and constructed on a five-point scale, provides for a range of scores from 24 to 120. Both questionnaires were adapted, minimally, for use with nursing students and nursing school directors.

Procedure

Ethical clearance was received from each of the participating institutions, and informed consent was obtained from each participant in the study. Each of the 48 nursing instructors was interviewed with the TPI by the investigator who had been trained in the use of the instrument. Each interview followed standardized procedure, took approximately one hour, and was tape-recorded for the purpose of later scoring. Inter-rater reliability was established on 12 randomly selected tapes. There was .89 percent agreement in scoring between the investigator and another trained rater.

Four hundred and sixty-three students completed questionnaires on the interviewed instructors. These questionnaires were administered by the investigator in group settings. The three nursing school directors completed a questionnaire for each of their instructors who had been interviewed.

Results and Discussion

Questions 1 and 2

In Table 1, the relationship between nursing instructor TPI scores and student mean rating scores of the instructors is shown by a positive Pearson correlation coefficient of +.24, significant beyond the .05 level. Also in Table 1, the relationship between nursing

instructor TPI scores and nursing school director ratings is shown by a positive Pearson correlation coefficient of .41, significant beyond the .01 level.

On the basis of the results the TPI is demonstrated to be a valid instrument for identification of nursing instructors who develop positive teacher-student relationships. While the correlation coefficients may appear low to moderate in magnitude, Anastasi (1976) confirms that an instrument may appreciably improve prediction if it shows any significant correlation with the criterion, however low (p.166).

Also evident in Table 1 is the positive relationship between director and student ratings of nursing instructors which is confirmed by a positive Pearson correlation coefficient of .45, significant beyond the .01 level. This finding supports that of Shillig (1975), and offers strength for the argument that students are capable of evaluating certain teacher behaviour.

Question 3

Nursing instructors whose scores on the TPI were 24 or less were categorized as being in the less effective range, while those with scores of 25 and above were categorized in the effective range. The criteria for determining these ranges are reported in the TPI manual (Selection Research, 1977). Presented in Table 2 are the results of the t-test which show that a difference exists that is significant beyond the .01 level between the mean scores of student ratings for the two categories of nursing instructors. Students gave a significantly higher rating to instructors whose scores on the TPI were in the effective range.

Again, using the same categories of performance, the results of the t-test, reported in Table 3, indicate a significant difference, beyond the .01 level, between the mean scores of director ratings for the two categories of nursing instructor performance. Directors rated significantly higher the instructors whose scores on the TPI were in the effective range. Further evidence for the validity of the TPI is provided by these findings.

Secondary questions

Nursing instructors predominantly taught in one of the following clinical specialties: Medicine, Mental Health, Obstetrics, Pediatrics, or Surgery. Presented in Table 4 are TPI results in relation to nursing instructor clinical specialty. An analysis of variance revealed no significant difference between the mean scores on the TPI of instructors in the five clinical specialties. The assumption that instructors teaching in Mental Health, which has a focus on the development of therapeutic relationships, would perform better on the TPI was not supported.

Table 1

Coefficients of Correlation Between Teacher Perceiver Interview (TPI) Scores and Ratings of Nursing Instructors and Students

	Mean	Standard Deviation	Correlation to Student Rating	Correlation to Director Rating
Instructor TPI Scores	25.33	5.66	.24*	.41**
Student Rating	155.19	12.56		.45**
Director Rating	96.81	13.22		-

* Significant beyond $p < .05$
** Significant beyond $p < .01$

Table 2

t-test On Student Rating Means for Nursing Instructors With Teacher Perceiver Scores in Two Ranges

Instructor TPI Score	N	Student Mean	Standard Deviation	Pooled Variance Estimate t Value	df	2-tail prob.
≤ 24	18	149.04	12.46	-2.82	46	.007*
≤ 25	30	158.89	11.26			

* Significant beyond $p < .01$

Table 3

t-test On Director Rating Means for Nursing Instructors With Teacher Perceiver Scores in Two Ranges

Instructor TPI Score	N	Director Mean	Standard Deviation	Separate Variance Estimate t Value	df	2-tail prob.
≤ 24	18	89.22	14.79	-3.09	26.24	005*
≤ 25	30	101.36	9.89			

* Significant beyond $p < .01$

Predominantly, nursing instructors taught in either the first, second, or third year of the nursing programs. As reported in Table 5, the highest mean score on the TPI was obtained by first year instructors, while the lowest mean score was attained by third year instructors.

For the analysis of the data, in Table 6, the Scheffe procedure was used to compare groups in order to locate the differences which contributed to the analysis of variance results. The .10 level of significance was selected to counteract somewhat the rigorous nature of the Scheffe test (Ferguson, 1976, p.297). A difference exists, significant at the .10 level, between the TPI mean scores for first and third year instructors. First year instructors scored significantly higher on the Interiew than did those instructors teaching in third year. Possibly instructors who teach first year students are more attuned to the needs of beginning students, creating a more involved and supportive relationship with their students. Or, as O'Shea and Parsons (1979) point out, third year instructors may see senior students as more independent and confident, and as requiring less support.

As indicated in Table 7, the mean for the instructor age is 34 years; for teaching experience, 4 years; and for nursing experience, 6 years. The relationship between instructor scores on the TPI and age is shown in Table 7 by a Pearson correlation coefficient of -.27. The relationship between TPI score and years of teaching experience is demonstrated with a Pearson correlation coefficient of -.26. Both of these coefficients are significant at the .05 level.

A partial correlation applied to the data revealed that the relationship is accounted for by age. It can be said, then, that as the age of nursing instructors increases there tends to be an association with lower scores on the TPI. A number of speculative questions arise in regard to this finding. Do younger instructors identify with the needs of students whose ages are closer to their own? Do older instructors fall into routines and become less attentive to the individuality of each student, seeing students as a group rather than as persons? Finally, are younger instructors better educated in the process dimension of teaching, and do they place a higher value on rapport with their students?

Instructor response to interview

At the conclusion of each interiew, the investigator asked the following question: "Tell me, how did you feel about this interview; how did you feel about answering all of these questions?" The statement of each instructor was tape recorded and later analyzed. A review of the tabulation of the responses revealed the following: 1.There were no negative statements about the content or process of the interview. 2. The interview was described as comfortable, non-threatening, relaxed, pleasant, enjoyable, worthwhile, helpful, interesting, useful, and a learning experience. 3. The questions

Table 4

Teacher Perceiver Interview Characteristics of Nursing Instructors Instructors in Different clinical Specialty Groups

Clinical Specialty	N	Mean	Teacher Perceiver Interview Standard Deviation	Low Score	High Score
Medicine	16	24.75	6.92	12	35
Mental Health	7	27.00	8.81	17	43
Obstetrics	6	26.00	2.52	23	29
Pediatrics	7	25.14	3.71	20	31
Surgery	12	24.91	4.01	18	30

Table 5

Teacher Perceiver Interview Mean Scores and Standard Deviations for Nursing Instructors in Different Year Levels

Year Level	N	Mean	Standard Deviation
First	13	27.84	4.68
Second	23	25.43	6.19
Third	12	22.41	4.41

Table 6

Analysis of Variance Between Teacher Perceiver Interview Mean Scores for Nursing Instructors in Different Year Levels

Source of Variance	Sum of Squares	df	Mean Squares	F Ratio	F Prob.
Between Groups	184.39	2	92.19	3.13	.05*
Within Groups	1322.25	45	29.38		
Total	1506.65	47			

* Significant beyond $p < .10$ (Scheffe Procedure)

Table 7
Coefficients of Correlation Between Teacher Perceiver Interview Scores and Nursing Instructor Characteristics (N-48)

			Correlation to		
	Mean	Standard Deviation	Age	Teaching Experience	Nursing Experience
TPI	25.33	5.66	-.27*	-.26*	-.18
Age	34.06	6.58	-	.54	.51
Teaching Experience	4.22	4.23		-	-.13
Nursing Experience	6.02	4.02			

* Significant beyond $p < .05$

were described as thought-provoking; important to teaching; helpful in exploring teaching beliefs, practices, and new ideas; practical, pertinent, and applicable; beneficial in the evaluation of the subjects own strengths and weaknesses as a teacher; useful in reinforcing or clarifying ideas about teaching; and helpful in providing an opportunity to share thoughts about teaching.

The favourable response to the interview on the part of nursing faculty suggests that they welcomed an opportunity to discuss and analyze their specific teaching behaviours. As a result, the TPI may have potential as a tool that will assist nursing educators to develop their teaching strengths.

Limitations

The participants in the study are from hospital-based diploma programs in nursing. Generalizing the findings to other nursing programs must be done with caution. As well, student and director responses on the questionnaires only reflect their perceptions of the instructor at the time of completing the questionnaire.

With regard to the criterion measures used to validate the TPI, they have been limited to student and director ratings. Student-teacher relationships represent the process dimension of teaching. No attention has been given in this study to the content dimension which includes teacher mastery of subject matter.

Conclusion

On the basis of school of nursing director and student ratings, it is concluded that the Teacher Perceiver Interview was a valid instrument to identify nursing teachers who establish rapport with students and activate student involvement in the learning process. Further research that relates teacher behaviour and student clinical behaviour to the TPI scores would be useful. As well, studies investigating the use of the TPI process as a means for increasing the teaching excellence of nursing faculty could yield fruitful results.

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RÉSUMÉ

Comment reconnaître les professeurs qui favorisent des rapports étudiants/enseignants

L'importance du rapport étudiants/enseignants comme paradigme du rapport infirmier/malade a amené des chercheurs à se pencher sur la validité et l'utilité de l'entrevue de perception de l'enseignant (Teacher Perceiver Interview ou TPI) pour identifier les professeurs qui favorisent les rapports étudiants/enseignants. Des critères externes ont été retenus pour la validation de l'outil: il s'agit des évaluations des étudiants et du directeur de l'école des sciences infirmières. La corrélation entre les évaluations et les résultats que les professeurs ont obtenus lors de l'entrevue ont révélé des résultats positifs et significatifs. Par ailleurs, les professeurs dont les résultats au TPI se situaient dans la catégorie d'efficacité, faisaient l'objet d'évaluations nettement plus favorables aussi bien de la part des étudiants que des directeurs. Les résultats obtenus par les professeurs ont été examinés par rapport à la spécialité clinique, au niveau d'enseignement, à l'âge et à l'expérience. La compilation des réponses des professeurs a fait apparaître une réaction très positive aux questions et à la démarche d'entrevue. La validité et l'utilité démontrée du TPI a des implications pratiques sur le plan du perfectionnement des professeurs, particulièrement en ce qui a trait aux rapports étudiants/enseignants.

IDENTIFICATION OF HEALTH RISK FACTORS AMONG UNDERGRADUATE UNIVERSITY STUDENTS
Stage 2: Health Hazard Appraisal

Anna Gupta . Sharon McMahon . Gurpal Sandhu*

Health Hazard Appraisal (HHA), also described as Health Risk Appraisal (HRA), is a method of estimating an individual's chance of becoming ill or dying from selected deseases within a defined period of time, usually 10 years, based on the individual's given set of characteristics. The individual's health behaviours and characteristics are compared to mortality statistis and epidemiological data.

The primary purpose of HHA is to help the individual become aware of his or her own identifiable health risk factors that may lead to illness or premature death. Neff and Landrum (1983) have found that the act of administering part of a questionnaire on alcohol use significantly reduced recidivism in a sample of drinking drivers. These two researchers suggest that simply completing the questionnaire may force people to make negative conclusions about their own actions, and may promote a private, voluntary decision to change (p.4). Thus, HHA may also be considered to be an assessment and health education tool, designed to motivate individuals to change personal lifestyle and habits that are considered risky to their life and health.

Method

Instrument

In the late 1940s and early 1950s Lewis Robbins conceived the idea of risk appraisal; also called risk quantification or estimation. In the 1960s Robbins and Hall jointly developed an instrument which they called Health Hazard Appraisal. They began to use it in the family practice residency program at Indiana Methodist Hospital (Leppink, 1982, p.42).

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* G. Sandhu left the University of Windsor in May 1982. She is presently residing in Quebec. The data processing, analysis and the writing phases of this project have been carried out by Gupta and McMahon.

* This research was done with a grant from the President's Research Fund, received in March, 1982.

During the 1970s, various types of HHA instruments were developed. Most of these consist of fill-in, self-reporting forms, with 21-25 items of client information about physical factors such as weight, height, and blood pressure; family and personal history for certain diseases; lifestyle habits such as drinking, smoking, and seat belt use; and the presence or absence of a high risk group as revealed by recent screening - for example, examination for breast or cervical cancer. When these data are computed, estimates of client's probabilities of dying during the ensuing 10 years from each of the 12 major causes of death relative to others in the same age-gender group are derived. The findings express the composite risk in form of "appraised age" (risk age), which may be higher, lower, or the same as the chronological age. They also include client's achievable (compliance) age; the lower risk age that can be achieved if client follows the recommendations in lifestyle changes (Doerr & Hutchins, 1981, pp.300-301).

In Canada, a computerized version of HHA, under the name of Evalu*Life, has been available from the Department of National Health and Welfare (DNH&W) since the early 1970s. Sponsored by the DNH&W, Spasoff, McDowell, Wright, and Dinkley (1981), undertook a comprehensive review of Evalu*Life in 1980-81. Experts in different causes of death and related risk indicators from Canada and elsewhere have updated and refined the procedures and precision of Evalu*Life (Fielding, 1982, p.338).

Validity and reliability of the HHA

Doerr & Hutchins (1981, p.303) report that a study by Cioffi, using the HHA, yielded both test-retest (N=59) and international consistency (N=70) reliabilities in the .80s, and that a study by Lauzon using the Evalu*Life yielded a test-retest reliability of .94 (N=26).

Regarding the effectiveness and efficacy of HHA, Wagner, Beery, Schoenbach, and Graham (1982, pp.347-351) question the scientific soundness of the various phases of the HHA method. Fielding (Frachel, 1984, pp.265-267) concedes that the tool in its current developmental state has flaws; but he describes widespread use and popularity, and on-going research on how effective HHA can be in increasing knowledge and motivation to change and in actually changing behaviour. For the individual, HHA provides a permanent document with personalized information that can be taken home, referred to at will, discussed with family, and used to track progress (or lack of it) in decreasing health risks over time. HHA can serve to gauge the risk of a defined population for a number of preventable diseases. It can be used as a sensitive indicator of community health, complementing morbidity and mortality statistics. It can also be put to work to recognize and quantify insurance-relevant health risks that are under the individual's control, and to help set life insurance rates based on risk levels (Fielding, 1982, p.338).

Procedure

HHA clinics were initiated and organized on the University of Windsor (U of W) campus in October 1980 by joint-researcher Sandhu. The monthly clinics provided the data for this research project, and met health and wellness needs of the university student community, in addition to providing clinical experience for post R.N. Diploma nursing students.

Each group of the nursing students (health care providers) who were scheduled for clinical practice in the HHA clinics received classroom instructions with regard to the purpose, and use of the Evalu*Life kits that were received from the DNH&W. They also received guidance for use of the data base in follow-up counselling and health education of the clients.

Most clients were students who attended the clinics, having heard of the services through the campus publicity media. At the clinics, before proceeding with the assessment, each client signed a statement permitting members of Nursing faculty the use of coded information for research purposes. The statement also covered issues of voluntary participation, confidentiality, and referral to client's physician. Self-reports were completed, independently, by clients. Help, as needed, was provided by the nursing students on duty. Blood pressures of each client were taken by the nursing students. No fasting cholesterol levels were taken for ethical reasons and because of lack of laboratory services.

Strict confidentiality was maintained through cross numerical indexing of client files. Researcher Sandhu supervized and coordinated the clinical services. The completed forms were sent to Ottawa after each clinic, and the processed printouts were returned for client's information and for follow-up counselling.

Sample and selection

Upon request by the researchers, the DNH&W again processed the HHA records of 486 undergraduate students from the total of 500 clients whose records had been sent to Ottawa during the 1980-82 academic years (Gupta, McMahon, & Sandhu, 1985). These 486 students became subjects of a convenient (volunteer) sample of the U of W undergraduate students for this second stage of the research survey.

Data processing

For the purpose of describing the health risk profiles of the sample population, the various questions in the Evalu*Life have been coded as variables 1 to 38. Appraised age and achievable age have been coded as variables 40-42. Using the Statistical Package for Social Sciences (SPSS), cross tabulations of frequency numbers and percentages of responses to each variable were computed in

Ottawa. Profiles of appraised age, achievable age, and recommendations for attaining the compliance age have been developed from the individual client printouts that were provided by student assistants at Windsor.

Findings

The results are presented in this report. Some regrouping has been done, and the questions are not exactly in the order that they appear in Evalu*Life. In order to condense the findings, some of the original tables of data are withheld from the report, but are available from the authors on request.

Height and weight

Height and weight are important indicators of genetic endowment, as well as of general physical health. Health risks, such as structural deformities of the skeleton, and nutritional risks, such as extreme obesity or anorexia nervosa, can be "cued" by simple measurements. Both variables demonstrate sex differences, with males obtaining higher recorded values. The two were compared to establish the proportion of over-weight subjects in the sample.

Findings show that 7.8% of the total population are overweight. The number of overweight females was twice that of males. Comparison of age and overweight variables reveals that older age groups have greater percentages of subjects who are overweight (Tables 1 & 2). Across the marital status variable, married and divorced subjects show the highest percentages of overweight subjects, with the single and separated individuals showing the lowest.

Canada's Home Fitness Test

This test has received much attention, for several years now. Of the sample population, 53.9% had taken the test. An overwhelming number (81.2%) of this subgroup are single, 16% are married, and very small numbers (1.2% and 1.5%) are separated and divorced students respectively.

Among the various age groups, it is the 40-49 age group that has the highest percentage (75.0) of participation. The 60+ age group has the lowest percentage (33.3) of students who had taken the test.

Physical activity

The findings reveal that 11.7% of the sample population engages in very little or no physical activity, 46.9% occasionally, and 41.4% does regular physical activity, at least 3 times per week. There is no significant difference between sexes. Marital status

Table 1
Overweight: Gender Distribution

Overweight Percentages:		0.0 n = 311	0.0–0.9 137	1.0–14.9 21	15.0–20.9 15	21.0–30.9 2	Totals 486
Male	R%	66.5	28.3	2.8	2.4	0.0	100.0
n=248	C%	34.0	14.4	1.4	1.2	0.0	51.0
Female		61.3	28.2	5.9	3.8	0.8	100.0
n=238		30.0	13.8	2.9	1.9	0.4	49.0
C Totals		64.0	28.2	4.3	3.1	0.4	100.0

Table 2
Overweight: Age Distribution

Overweight Percentages: Age			0.0 n=311	0.0–0.9 137	1.0–14.9 21	15.0–20.9 15	21.0–30.9 2	Totals 486
15–19	73	R%	60.3	35.6	2.7	1.4	0.0	100.0
		C%	9.1	5.3	0.4	0.2	0.0	15.0
20–24	240		70.8	25.4	2.1	1.3	0.4	100.0
			35.0	12.6	1.0	0.6	0.2	49.4
25–29	91		65.9	22.0	5.5	5.5	1.1	100.0
			12.3	4.1	1.0	1.0	0.2	18.6
30–39	40		57.5	32.5	10.0	0.0	0.0	100.0
			4.7	2.7	0.8	0.0	0.0	8.2
40–49	24		41.9	33.3	16.6	8.3	0.0	100.0
			2.0	0.6	0.8	0.4	0.0	4.8
50–59	12		8.3	58.3	0.0	33.4	0.0	100.0
			0.2	1.4	0.0	0.8	0.0	2.4
60+	6		50.0	33.3	16.7	0.0	0.0	100.0
			0.6	0.4	0.2	0.0	0.0	1.2
C Totals	486		64.0	28.2	4.3	3.1	0.4	100.0

categories indicate 42.1% of single, 39.2% of married, 30% of divorced, and 16.7% of separated students engage in regular physical activity. It is encouraging to note that among the various age groups, the highest percentage (66.6%) of students who have regular physical activity is the oldest (60+) age group. The second highest (50.7%) is the youngest (15-19) age group of students (Table 3). These findings demonstrate that the physical activity of the

Table 3

Physical Activity: Age Variable

Age	Little or none	Occasional	Regular	Total
15-19 n(R%)	9(12.3)	27(37.0)	37(50.7)	73(100.0)
C%	1.9	5.6	7.6	20.1
20-24	22(9.2)	124(51.7)	94(39.2)	240(100.0)
	4.5	25.5	19.3	49.4
25-29	14(15.4)	43(47.3)	34(37.4)	91(100.0)
	2.9	8.8	7.0.	18.7
30-39	3(7.5)	20(50.0)	17(42.5)	40(100.0)
	0.6	4.I	3.5	8.2
40-49	6(25.0)	7(29.2)	11(45.8)	24(100.0)
	1.2	1.4	2.2	4.8
50-59	2(16.7)	6(50.0)	4(33.3)	12(100.0)
	0.4	1.2	0.8	2.4
60+	1(16.7)	1(16.7)	4(66.6)	6(100.0)
	0.2	0.2	0.8	1.2
C. Total	57	228	201	486
C. Total %	11.7	46.9	41.4	100.0

sample population of university students, is different from that of the general Canadian population. For example, Statistics Canada (February, 1983) reports that the proportion of persons who are "very active" declines steadily with age. However, the report also suggests the need for refinement of the index, by defining "very active" in different ways for various age groups (p.32).

Smoking

The history of the sample population reveals that 21% of the 486 students are active (current) smokers. There is an insignificant difference in the numbers of male and female smokers; but, more females than males are heavy smokers. Fifty-five point one percent (55.1%) of the females smoke more than 15 cigarettes a day, compared to 40.7% of the males.

Among the various age groups, the highest percentage of active smokers is in the 20-24 age group. When the number of cigarettes smoked per day and the age variables are examined, an inverse trend is noted.

Marital status and smoking profiles indicate that 80.4% of the active smokers are single students. However, the divorced,

separated, and other categories show more heavy smokers than the single and married categories (Tables 4 to 6).

Table 4

Smoker: Gender Distribution

Gender	n =	Smoker 102	Ex-Smoker 78	Non-Smoker 306	Totals 486
Male	R%	21.8	15.7	62.5	100.0
	C%	12.0	8.0	31.9	51.9
Female		20.2	16.4	63.4	100.0
		9.0	8.0	31.1	48.1
C Totals		21.0	16.0	63.0	100.0

Table 5

Smoker: Age Distribution

Age	n =	Smoker 102	Ex-Smoker 78	Non-Smoker 306	Totals 486
15 - 19	R%	9.6	9.6	80.8	100.0
	C%	1.4	1.4	12.1	14.9
20 - 24		22.0	15.0	63.0	100.0
		10.9	7.4	31.1	28.7
25 - 29		27.7	17.5	54.8	100.0
		5.1	3.3	10.3	18.7
30 -39		25.0	17.5	57.5	100.0
		2.1	1.4	4.8	10.2
40 - 49		20.8	29.2	50.0	100.0
		1.0	1.4	2.5	4.9
50 - 59		16.7	25.0	58.3	100.0
		0.4	0.6	1.4	2.4
60+		0.0	33.4	66.7	100.0
		0.0	0.4	0.8	1.2
C Totals		21.0	16.0	63.0	100.0

Table 6

Smoker Versus Marital Status

Status	n =	Smoker 102	Ex-Smoker 78	Non-Smoker 306	Totals 486
Single	387 (R%)	21.1	12.7	65.1	100.0
Married	79	16.5	25.3	58.2	100.0
Separated	6	50.0	16.7	33.3	100.0
Widowed	1	0.0	0.0	100.0	100.0
Divorced	10	30.0	20.0	50.0	100.0
Other	3	33.3	66.7	0.0	100.0
C Totals	486	21.0	16.0	63.0	100.0

The question about cessation of smoking refers to cigarettes. The number of cigar and pipe smokers is insignificant and hence no details are presented in this report. It reveals that 53.8% of the subjects who had stopped smoking, had done so within the past one year of the study. Overall, 15.7% males and 16.4% females who stopped smoking had done so during the past 7 years of the study. Eighty-one point two percent (81.2%) of the single ex-smokers had quit smoking within the past one to three years of the study, and 18.8% had quit four or more years before the study. Sixty percent (60%) of the married ex-smokers had quit within the last three years and 40% had done so four or more years before the study. One hundred percent (100%) of the divorced subjects quit smoking within the last two years of the study.

According to the 1978-79 Canada Health Survey (CHS) (1981, p.50), 40% of Canadians are active smokers. This includes 41.3% of all males and 33.5% of all females. Both the U of W study and the CHS show the 20-24 age group as having the highest percentages of active smokers.

Fielding (1982, p.9) writes that analysis of smoking trends suggests that the anti-smoking advertising in the electronic media in the late 1960's contributed to significant annual declines in cigarette consumptions in the U.S.A. Per capita tobacco consumption from 1960 to 1970 declined 10.5%, compared to an increase of 4.2% in Canada. Smoking cessation clinics in U.S.A. have achieved a 12 to 18 month success rate of 13% to 37%, and about a 20% success rate in 4 to 5 year follow up studies.

McIntosh (1984, p.141), reports that, according to the 1965-1979 survey on smoking habits of Canadians, smoking among Canadian women of child bearing age has only fallen from 38% in the mid 60s to 35% in the late 70s, with the latest evidence suggesting an increase in smoking among the 15 to 19 year old women. The proportion of light smokers among Canadian women of child bearing age has decreased, and that of moderate and heavy smokers has increased. Thus, a fall in smoking prevalence may be counterbalanced by higher relative risks among the remaining and likely heavier smoking population. Lee (1983, p.12) reports that the study done by McMaster University's Urban Air Environment Group detected that the most deleterious effects on the respiratory health of children are caused by smoking mothers.

Alcohol consumption

Around 75% of the sample population consumes alcoholic beverages. Overall, the differences between male and female subjects in the number of drinkers and in the volume of consumption of alcohol per week are marginal, except in the beer drinking profile. Of the 232 beer drinkers 72.4% are males. Six point six percent (6.6%) of the male beer drinkers consume more than 12 bottles of beer per week, whereas none of the females drink in that range. Females show a perference for wine (Tables

7, 8, 9 & 10). Lamphier (1983, p.16) reports that a recent three-part study of post secondary drinking habits in Canada confirmed a pattern that has already been identified in the U.S.A.: that alcohol use increases significantly once students enter

Table 7
Alcohol Consumption: Versus Gender

Gender n=		Drinks 363	Ex-Drinkers 19	Non-Drinkers 104	Totals 486
Male	R%	79.1	4.0	16.9	100.0
	C%	40.3	2.1	8.6	51.0
Female		70.2	3.8	26.0	100.0
		34.4	1.8	12.8	49.0
C Totals		74.7	3.9	21.4	100.0

Table 8
Bottles Of Beer/Week Versus Gender

Gender n=		1-3 132	4-6 54	7-9 10	10-12 25	13-15 3	16-20 6	21-24 2	Totals 232
M	R%	50	27.8	3.0	13.1	1.8	3.6	1.2	100.0
	C%	36.2	19.8	1.8	9.5	1.3	2.6	0.9	72.4
F		75.0	12.5	7.8	4.7	0.0	0.0	0.0	100.0
		20.7	3.5	2.2	1.3	0.0	0.0	0.0	27.6
C Totals		56.8	23.3	4.3	10.8	1.3	2.6	0.9	100.0

Table 9
Glasses Of Wine Versus Gender

Gender n=		1-2 112	3-4 30	5-6 4	7-8 9	9-10 5	11-12 2	Totals 162
Male	R%	70.3	11.0	6.2	4.7	6.2	1.6	100.0
	C%	28.8	4.4	2.4	1.8	2.5	0.6	39.5
Female		68.3	23.5	0.0	6.2	1.0	1.0	100.0
		41.3	14.2	0.0	3.8	0.6	0.6	60.5
C Totals		69.1	18.6	2.4	5.6	3.1	1.2	100.0

Table 10
Shots Of Spirits Versus Gender

Gender n=		1-2 109	3-4 21	5-6 9	7-8 5	9-10 4	11-15 2	16-21 5	Totals 155
Male	R%	65.4	11.6	8.9	3.9	5.1	0.0	5.1	100.0
	C%	32.9	5.8	4.5	1.9	2.6	0.0	2.6	50.3
Female		75.3	15.6	2.6	2.6	0.0	2.6	1.3	100.0
		37.4	7.8	1.3	1.3	0.0	1.3	0.6	49.7
C Totals		70.3	13.6	5.8	3.2	2.6	1.3	3.2	100.0

university. For example, only 24.1% of grade 13 students in 1981 reported drinking once a week or more frequently, compared to approximately 70% of students in the University of Guelph and the Wilfred Laurier University studies in 1977 and 1982 respectively. CHS (1981, p.23) reports that 65% of Canadians in general and 77% of the working population in particular take alcoholic beverages at least once a month. At every age, Canadian men who are current drinkers outnumber women in the same category by a considerable margin. The survey notes that the proportion of the population who are current drinkers, and who have seven or more drinks per week, is generally greater in higher levels of education.

The age variable shows that the 25-29 age group has the highest percentage (84.6%) of subjects who consume alcoholic beverages. The 20-24 and the 15-19 age groups are second and third highest respectively (Table 11). When age and types of drinks are examined, it is noted again that the three younger age groups (15-29) have consistently higher percentages of beer, wine, and spirit drinkers. It is of even greater significance to note that the 20-24 age group tops each of the three beverage lists. With the exception of one person in the 60 or over category, no one above the age of 30 drinks more than 7 bottles of beer a week. In the wine and spirit drinking lists, the small numbers of students in the 50-60+ age groups have proportionately higher percentages of subjects who consume more than 7 drinks a week.

Across the marital status variable, the differences in the numbers of students who drink are marginal. When profiles of types and amounts of drinks are examined, it is found that 30% of the single students and 40% of those in other categories drink 7 or more bottles of beer a week, compared to only 9.6% of married students. However, the opposite pattern of 23.3% of the married students and only 10.8% of the single students is noted to consume seven or more shots of spirit per week. However, when the total alcohol consumption is examined, it is noted that 22.2% of the single subjects take more than 7 drinks per week, in comparison with 11.4% of married students and 15% of other categories of subjects who drink in that range (Tables 12 & 13).

Driving and seat belt use

Of the 447 students who responded to the question, "Miles driven annually", 76.2% drive one to 10,000 miles, 20.7% drive 11 to 30,000 and 3.1% drive more than 31,000 miles per year. The highest percentage of subjects, both men and women (39.6% and 21.7% respectively), drive one to 4,000 miles annually. The number of males who drive 11 to 15,000 miles is more than twice the number of females (7.8% compared to 3.4% females).

Across the marital status variable, 80% of the combined categories of widowed, divorced, separated, and other drive one to 10,000 miles annually. Single subjects are second highest (77.6%), and married students are the lowest (60.9%) in driving this

Table 11
Total Alcohol Consumption: Age Distribution

n =		Drinks 363	Ex-Drinkers 19	Non-Drinkers 104	Totals 486
15 - 19	R%	68.5	2.7	28.8	100.0
	C%	10.3	0.4	4.3	15.0
20 - 24		75.4	3.8	20.8	100.0
		37.3	1.9	10.3	49.4
25 - 29		84.6	1.1	14.3	100.0
		15.8	0.2	2.7	18.7
30 - 39		70.0	15.0	15.0	100.0
		5.8	1.2	1.2	8.2
40 - 49		66.7	0.0	33.3	100.0
		3.3	0.0	1.6	5.0
50 - 59		58.4	8.3	33.3	100.0
		1.4	0.2	0.8	2.4
60+		66.7	0.0	33.3	100.0
		0.8	0.0	0.4	1.2
C Total %		74.7	3.9	21.4	100.0

Table 12
Alcohol Consumption: Marital Status Distribution

Statis	n	Drink %	Ex-Drinkers %	Non-Drinkers %	Total %
Single	387	75.5	2.5	22.2	100.0
Married	79	74.7	5.0	20.3	100.0
Other	20	60.0	25.0	15.0	100.0

Table 13
Total Drinks Per Week: Marital Status

Status	n	- 1	1 - 6	7 - 24	25 - 39	Total
Single	387	24.8	53.0	21.2	1.0	100.0
Married	79	25.3	63.3	8.9	2.5	100.0
Other	20	40.0	45.0	15.0	0.0	100.0

distance. The age variable reveals that no one in the 50+ age group drives more than 15,000 miles annually, whereas 21.6% of the 30-39 age group, 13.6% of the 40-49 age group, 10.1% of the 20-29 age group, and 4.7% of the 15-19 age group drive 16,000 to 40,000+ miles annually.

Seat belt use has been mandatory in the Province of Ontario for some time; therefore 100% of the population should be wearing seat belts. Of the 407 subjects who responded to the question only 35.8% use seat belts 100% of the time, and 20.3% use them only 1-25% of the time. Twenty percent (20%) of the females and 15% of the males use seat belts 100% of the time. CHS reports that a slightly larger proportion of women use seat belts all or most of the time.

Among the marital status categories, 53.5% of the married subjects, 32.9% of the singles, and 14.2% of the other combined categories use seat belts 100% of the time. On the lowest range of usage (1-25% of the time), the singles have the highest percentage (23.6%), whereas only 8.5% of the married subjects use seat belts in this range.

Among the various age groups, the lowest percentage (29.0) of subjects who use seat belts 100% of the time is the 20-24 age group. The second and third lowest ranking are the 25-29 and the 15-19 age groups respectively. It is again noteable that the older the group, the greater the percentage of subjects who use seat belt 100% of the time (Table 14).

Table 14

Percentage of Time Seat Belt Used: Age Variable

		1 - 25 83	26 - 50 52	51 - 75 38	76 - 99 88	100 146	Total 407*
Age 15-19	R%	23.7	6.8	10.2	16.9	42.4	100.0
	C%	3.4	1.0	1.5	2.5	6.1	14.5
20-24		24.5	13.0	9.0	9.0	29.0	100.0
		12.0	6.4	4.4	12.0	14.3	49.1
25-29		19.2	15.4	11.5	21.8	32.1	100.0
		3.7	2.9	2.2	4.2	6.1	19.2
30-39		9.1	18.2	3.0	21.2	48.5	100.0
		0.7	1.5	0.2	1.7	4.0	8.1
40-49		9.5	9.5	9.5	9.5	16.0	100.0
		0.5	0.5	0.5	0.5	3.2	5.2
50-59		0.0	9.1	18.2	27.3	45.4	100.0
		0.0	0.2	0.5	0.7	1.3	2.7
60+		0.0	20.0	0.0	0.0	80.0	100.0
		0.0	0.2	0.0	0.0	1.0	1.2
C Total		20.4	12.8	9.3	21.6	35.9	100.0

*79 SUBJECTS DID NOT RESPOND TO THE QUESTIONS

According to CHS (1981, p.25) there are no statistically significant differences in the frequency of reported seat belt use in relation to the kilometers travelled annually, for either driver or passengers. However, the number of kilometers travelled annually in automobiles and the failure to wear seat belts both increase the risk of death and injury from motor vehicle accidents (MVAs). MVAs are a leading cause of death and injury in Canada, especially for young adults. The provinces of Ontario, Quebec, Saskatchewan, and British Columbia have laws requiring seat belt use. They report that 60% of drivers and passengers use seat belts all or most of the time. Where seat belt use is not mandatory, only 16% report that they wear seat belts all or most of the time.

Disabling depression and family history of suicide

This is a greatly hidden mental health problem in society. If a campus is seen as a micro-society, it seems possible that depressive, despondent behaviours or symptoms would be possible as an element of normal adaptation to contemporary stress, or to the hassles and uplifts of university student life.

Of the male students, 7.7% and 5% of the female students responded that they suffer from disabling depression. Of these 31 students (6.2% of the total sample), 19.4% are in the 15-19 age group, 54.8% are in the 20-24 age group, and 12.9% are in the 25-29 age group. These three age groups together constitute 87.1% of the total number of subjects who suffer from this condition.

Single students seem most prone to disabling depression. The findings show that 83.9% of the single group, 3.2% of the married group, 3.2% of the separated group, 3.2% of the divorced and 6.5% of other marital status groups experience disabling depression.

Of the total sample population, 2.1% give a family history of suicide. Again, it is highly important to note that 90% of these subjects are from the 15-29 age group of students. The remaining subject is from the 50-59 age group. Do these two profiles of disabling depression and family history of suicide among the 15-29 age group raise the question of a link between these two conditions?

Parent heart attack

Coronary heart disease seems to play a relatively minor role in the HHA profile for younger students.

Diabetes

The Diabetic Association of Canada states that one in ten (10%) Canadians has the potential for diabetes Mellitus. Various studies have shown a definite genetic pattern of inheritance associated with the tendency for and manifestation of the disease. It is

disturbing to note that 20.6% of the U of W sample population has a family history of diabetes. Does this mean that a genetic pool twice the norm for the population at large exists on the campus?

Seventy-nine percent (79%) of the 100 subjects with a family history of diabetes are single, 18% are married and 2% are separated students. Age and sex show no bearing upon family history of diabetes.

In this study 7.3% of the male subjects and 9.2% of the female subjects have controlled diabetes. Only one student (female) has uncontrolled diabetes, making a total of 41 students (8.4% of the sample) with active diagnosed insulin-dependent diabetes. The fact that 40 out of 41 students have controlled diabetes (97.6%) speaks well of the contemporary health education and self-care responsibility assumed by these individuals. Age distribution shows that 80% of the 40 controlled diabetics are in the 15-24 age group, 7.5% in the 25-29 age group, 10% in the 30-59 age group and 2.5% in the 60+ age group.

Rectal disorders

Of the 2.5% who have rectal disorders other than hemorrhoids, 75% are in the 15-29 age groups, 16.8% are in the 30-39 age group, and 8.3% are in the 60+ age group. It is worth noting that 91.7% of the 12 subjects with the disorder are single students; the remaining 8.3% are married students.

Chronic bronchitis/emphysema

Twice as many females (66.7%) as males (33.3%), a total of 5.6% of the sample population, said that they suffer from chronic bronchitis/emphysema. The age variable shows that the 30-39 age group has the highest percentage (22.5%), the 40-49 age group has the second highest percentage (8.3%), and the 15-29 age group has the lowest percentage (4.0%) of students suffering from this condition. None of the students in the 50+ age group responded positively to this question.

CHS (1981, p.115) reports that, apparently, 2.2% of the general population suffer from chronic bronchitis/emphysema. Sex distribution shows an increase of 2.6% in the male population of the "less than 15" age group, an increase of 8.6% in the female population of the 15-64 age group, and a 5.2% increase again in the male population of the 65+ age group. This balances out to minimal significant differences between sexes in the overall Canadian general population. Could it be that hormonal changes and life style changes such as smoking habits, increased stress, etc. make the young and middle aged female population more susceptible to chronic bronchitis/emphysema? Also, does the fact that 5.6% of the U of W sample population, and only 2.2% of the general Canadian population, suffer from this condition confirm its positive relationship with environmental pollution - a condition so

Blood pressure

The impact of high blood pressure (hypertension) is often insidious and can create cardiovascular, cerebral, renal, and other vital organ damage without startling signs or symptoms.

Twice as many males (61.6%) as females (30.8%) have systolic blood pressure readings of above 120 mm Hg. More than four times as many males (13.8%) as females (3.4%) have diastolic blood pressure readings of above 90 mm Hg. Since over 90% of the sample population is below 40 years old, blood pressure readings of 120 mm Hg. systolic and 90 mm Hg.diastolic are mentioned arbitrarily as upper normal limits.

Across the age variable, the higher the age of the group, the higher is the perentage of subjects with higher blood pressure readings. The findings indicate that 100% of the 60+ age group, 68.5% of the 40-59 age group, 44.6% of the 20-39 age group, and 41.1% of the 15-19 age group are above the 120+ mm Hg. systolic readings. A similar pattern of direct correlation between age and diastolic readings is noted. This trend also corresponds with trends among the general population (CHS, 1981, p.143).

A higher percentage of married students have high blood pressure readings. Could this be due to the higher proportion of older students in the married group?

Cervical cancer risk

The highest percentage (41.0) of subjects who have never had a pap smear is among the single women. It is encouraging to note that a higher proportion of women who are in the married and other marital status categories have had three or more pap smear tests, with negative results, in the last five years of this study. It is also noted that the younger the age group, the higher the proportion of women who have never had the test done. (Table 25).

Of the 236 female students who responded to the question, 22% began regular sexual intercourse in the teen years, 40.3% at age 20-25, and the remaining 37.7% at age 26+, or never. Of the 41 students in the 15-19 age group, 75.6% indicated that they do not have regular sexual intercourse. Of the single subjects, 20.3% began intercourse in the teen years, and 30.8% at age 20-25 years.

Seventy-three point five (73.5%) of the married and 75% of the separated subjects began regular sexual intercourse at age 20-25 years.

The researchers wonder why this question is only addressed to the female population. Is there a relationship between female sexual intercourse practices and cervical cancer?

Breast cancer risk

Three point eight percent (3.8%) of the female students had a mother or sister with breast cancer. The researchers wonder why this question is addressed only to the female population. Though comparatively rare, males do suffer from breast cancer. There may have been some hidden male subjects not assessed due to this sex specificity.

The older the group age, the higher the percentage of subjects who do monthly Breast Self examination (BSE). Thirty point two percent (30.2%) of the 15-19 age group, compared to 58.6% of the 30-39 age group (the highest percentage of all groups), do monthly BSE. The married, separated, and other marital status categories indicate that higher percentages of these subjects do monthly BSE than of single females.

Discsussion and Conclusion

The findings of the HHA study of the sample population of U of W undergraduate students support the data used for the development of the **Health Field Indicators,** by the DNH&W, to create the broader perspective of health risks experienced by Canadians (Ouellet, 1979). These risk factors are further highlighted briefly below.

MVAs account for more than one-third of deaths of young men of up to 35 years of age. There are twice as many men as women killed across Canada by MVAs (Statistics Canada, 1983, p.21). The sample student population profile indicates a higher risk of MVAs for the younger males, due to a greater amount of driving, and to driving with less compliance with laws regarding seat belt use and blood alcohol levels.

Motor vehicle safety, "Don't drink and drive" and seat belt compliance campaigns should be aspects of on-going media reminders.

Suicide is an important cause of death in those as young as 15 years old (Ouellet, 1979, p.18). Morris (1982, p.95) lists suicide as the third leading cause of death in the 15-24 age group. The prevalence seems to be increasing from year to year in industralized nations. Marks (1979, p.305) points out that for every successful suicidal death, 200 unsuccessful attempts can be estimated.

Ouellet (1979, pp.22 & 23) says that, while not as distressing as numbers found in western provinces, Ontario campuses should not become complacent with their slightly fewer numbers. when the student suicide profile is combined with that of disabling depression, the U of W campus has a significant problem in the area of mental health.

Greater quantity, quality, and duration of collaborative interventions by campus medical officers, by psychologists and the psychological centre, and by other interested counsellors and professionals need to be planned.

Clarke, Krieger, Marrett, and Saskolne (1983) report that malignant neoplasms are the second major cause of all deaths, in 1982 in Ontario, for those above 15 years of age. As has been true for nearly three decades, malignant neoplasms of trachea, bronchus, and lung rank first among cancers as a cause of death in males, across all ages, and within each five year group from 35 years and older. In those dying before age 35, leukemia is ranked first among the cancer causes of death.

For the last 50 years, the most frequent cause of cancer deaths in females has been cancer of the breast; with second being cancer of trachea, bronchus, and lung. Nearly 800 deaths are due to malignant neoplasms of the major female reproductive organs, with cancer of ovary being fourth as a cancer cause of death (Clarke et al., 1983, p.182).

Cigarette smoking as a cause of cancer, especially of the respiratory organs, has long been established. It is also considered to be a cause of cardiovascular and gastrointestinal problems. Wigle, Mao, and Michael (1980, pp.274 & 275), state that the rate of increase of lung cancer mortality and incidence rates during recent years have been greater among females than among males. Furthermore, it has been found that life expectancy decreased with amount smoked. The results of their Alberta study indicate that substantial proportions of several common cancers were attributable to smoking.

Seventy seven point three percent (77.3%) of the active student smokers are in the 20-29 age group. Marital problems such as divorce and separation seem to be linked with an increase in the number of cigarettes smoked per day. While there is no significant difference between sexes as far as the numbers of smokers are concerned, female students are found to be heavier smokers.

Control programs to reduce smoking should have a substantial impact on the burden of several major cancers, in addition to a reduced risk of cardiovascular and other diseases (Wigle et al, 1980, p.275).

The pap smear test is considered beneficial in the detection of cervical cancer. Thirty two point seven percent (32.7%) of the female students have never had pap smear tests.

Only 41.2% of the female students do monthly Breast Self examination. Miller (1983, pp.99 & 101) reports that screening by mammography and physical examination of breasts reduced mortality from breast cancer in women over the age of 50 but not in younger women. Almost one-half of the women in the National

Breast Screening Study are doing BSE 12 times a year - a frequency that is much better than the general population. A number of women have attributed to early detection of cancers between screening examinations to their practice of BSE.

Alcohol has been linked with almost all of the top twelve major causes of death in Canada. Seventy point two percent (70.2%) of the female and 79% of the male students consume alcoholic beverages. It is interesting that Lapierre (1984, p.15) reports similar findings from a Canada-wide survey. He writes that women are more likely to abstain from alcohol than men (29% compared to 19% for men). Yet, it is also among women that the greatest increase in the number of drinkers has occurred. For women, the proportion of drinkers varies between 67% and 74%, while it is between 74% and 84% for men.

Eight men and three women students in the present study population indicated an alcohol consumption of nine to 21+ shots per week. Gilbert (1983, p.5) asserts a preventive effect of optimal alcohol use on MVA and heart disease of an average one drink per day.

In the prescription aspect of the students' HHA profile, 14% of the students who consume alcohol are asked to reduce their consumption by more than 15 drinks, and the remaining 86% are asked for a reduction of seven to 15 drinks per week. These ranges of reduction will enable each student who drinks to stay within the safe margin of six drinks per week.

Lack of physical activity, being overweight, and improper nutritional concerns are linked with many of the major causes of death in Canada.

In spite of the excellent facilities at the Faculty of Human Kinetics, it is astonishing that nearly 60% of the sample population, particularly the younger age groups of students, do not engage in regular physical exercise. Is this because of the time constraints of studies and, in some cases, of studies and work combined, or is it because of a lack of understanding of the importance of physical activity to one's health and well-being? Could it be that the facilities at the Faculty of Human Kinetics are "too far away" (1 km) to conveniently fit into the tight student schedule?

Overweight status among the student population (8% of the sample) seems to be less of a problem than several other risk factors that are appraised. For 94% of the overweight subjects, the prescription table asks for a ten to 20 pound weight reduction. More than 20 pounds weight reduction is prescribed for the rest of the overweight subjects.

On the other hand, several of the students in the 15-29 age group have lower appraised ages, ranging nine to 14 years. It is

possible that most of these students are of Asian background with normal small builds. There may also be cases of anorexia nervosa and other nutrition/diet related risks that are not assessed in this part of the total study.

Conditions such as rectal disorders and chronic bronchitis are also more common among the younger age groups. The reverse is noted in relation to elevated blood pressure readings and age.

It is also noted that many students have appraised ages ranging from 10 to 22 years higher than their actual ages. Some of these students show the potential to achieve ages lower than their appraised ages by one to ten years. A few individuals have the potential to achieve ages lower than their chronological ages by three to ten years. These desirable lower achievable age targets can be attained only if the individuals comply with prescriptions: stopping smoking, reducing alcohol consumption, using seat belts 100% of the time, taking regular physical activity, and so forth.

Recommendations

These will be incorporated at the conclusion of the Stage Three. Although Stage Three is essentially the development of a wholistic lifestyle assessment tool, this pilot study casts further light on the health behaviour profiles of the students.

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RÉSUMÉ

Identification des facteurs de risque de maladie chez les étudiants de premier cycle universitaire - Stade 2: Évaluation des risques médicaux

Un échantillon commode de 486 étudiants de premier cycle a été soumis à une évaluation des risques médicaux (ERM), deuxième volet d'une étude en trois temps sur l'identification des facteurs de risque chez les étudiants d'université. A cette fin, on a utilisé la trousse d'évaluation des risques médicaux Evalu*life fournie par le ministère fédéral de la Santé et du Bien-être social. Les résultats indiquent que les étudiants célibataires âgés de 15 à 29 ans sont les plus vulnérables aux risques médicaux, compte tenu de leurs habitudes personnelles liées à la consommation d'alcool, au tabagisme, au port de la ceinture de sécurité, à l'activité physique etc. Soixante-quinze pour cent de la population de l'échantillon consomment des boissons alcooliques et il n'y a que peu de différences d'ensemble entre les deux sexes. Près de 21 pour cent étudiants de l'échantillon sont des fumeurs et, ici encore, il n'existe qu'une différence négligeable entre les sujets masculins et les sujets féminins. Toutefois, davantage de femmes que d'hommes sont de gros fumeurs. Seulement 36 pour cent de la population utilisent systématiquement la ceinture de sécurité et environ 20 pour cent ne l'attachent que de 1 à 25 pour cent du temps. Dans l'ensemble, les hommes utilisent un peu moins souvent que les femmes la ceinture de sécurité. Les hommes sont deux fois plus nombreux que les femmes à conduire et à parcourir chaque année des distances plus importantes. Environ 59 pour cent des étudiants n'ont aucune activité physique régulière ou ne se livrent que rarement à ce genre que l'on retrouve le plus grand nombre d'étudiants souffrant de dépression invalidante, de diabète (équilibré), de troubles rectaux et d'antécédents familiaux de suicide. C'est également chez les plus jeunes et célibataires que l'on retrouve les étudiantes qui n'ont jamais eu de frottis de Papanicolaou et qui ne pratiquent pas systÉmatiquement chaque mois l'auto-examen des seins.

UNE EXPÉRIENCE D"ENSEIGNEMENT DU CONCEPT "SYSTEME FAMILIAL" ET DE L"INTERVENTION "FAMILLE-INFIRMIERE"

Denyse Latourelle

L'intervention de l'infirmière auprès de la famille est une dimension de plus en plus mise en évidence et perçue essentielle dans la conception actuelle des soins infirmiers (O.I.I.Q., 1974, 1978, 1982, 1984; Allen, 1977). Que ce soit dans une perspective d'enseignement à la famille, de soutien lors de changements dans les rôles familiaux, d'intervention dans une situation de crise, de référence en vue d'une thérapie familiale, ces différentes actions requièrent que la famille devienne la cible même de l'intervention. Mes expériences en tant que clinicienne et enseignante m'ont appris qu'il s'agit alors d'une intervention complexe qui présuppose des connaissances et des habiletés complémentaires et quelque peu différentes de celles utilisées lorsque l'infirmière est en relation avec un seul individu. La formation de l'infirmière a toujours été très axée sur l'apprentissage de la relation individuelle (one-to-one relationship) et des concepts psychodynamiques nécessaires à la compréhension de l'individu. Ceci s'avère toujours essentiel mais ce que je veux souligner c'est qu'il est tout aussi important d'accorder une place primordiale à des concepts qui permettent de mieux comprendre le fonctionnement de la famille en tant que système et d'acquérir des habiletés pour intervenir à l'intérieur d'un tel système.

Plusieurs auteurs ont signalé les difficultés et les écueils que rencontrent les infirmières dans leur travail avec les familles. Parmi eux, Friedman (1981) croit que l'approche centrée sur la famille est un idéal plutôt qu'une pratique courante non seulement dans les milieux de soins primaires mais aussi dans ceux de la santé communautaire même si depuis plusieurs années les infirmières de santé communautaire ont prêché le concept que la famille est le patient et la cible de leurs services. Malheureusement, toujours selon cet auteur, nos domaines de pratique et de spécialisation en santé communautaire ainsi que les modes de distribution des soins apportent un démenti à cette approche; les catégorisations, santé maternelle et infantile, santé au travail, santé scolaire, gériatrie indiquent que l'accent est mis sur l'individu plutôt que sur l'unité familiale. Pour leur part Thibaudeau et coll. (1984), lors d'une recherche effectuée au Québec et qui porte sur les soins infirmiers aux familles défavorisées, soulignent "qu'il est primordial que l'infirmière comprenne la structure et la dynamique de la famille et possède l'habileté à observer et à communiquer efficacement de façon à aider ses clients à clarifier le sens de leurs comportements."

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Le but de cet article est de présenter une expérience de cinq années faite auprès d'étudiantes* d'un programme de maîtrise en sciences infirmières et de mettre en relief les aspects fondamentaux lors de l'élaboration et de la réalisation de cette expérience d'enseignement du concept "système familial" et de l'intervention "famille-infirmière."

Description de l'experience

Facteurs déterminants et considérations préliminaires

Six crédits sont alloués à ce cours (sur la base de 15 heures/crédit pour la partie théorique, 45 heures/crédit pour la partie clinique) et ce, à l'intérieur d'un programme qui comporte 45 crédits. Ce temps relativement court s'est avéré le premier facteur dont je devais tenir compte pour la répartition et l'organisation des trois modalités pédagogiques que je trouvais requises soit, un contenu théorique, une application clinique et la supervision de cette dernière.

Le deuxième facteur a été, comme il se doit, de considérer la préparation, les expériences antérieures et les besoins des étudiantes éventuelles. Ces étudiantes avaient déjà un baccalauréat; leur expérience de travail était d'une durée variable et se situait principalement dans les secteurs des soins psychiatriques ou de la santé communautaire. Très vite il m'est apparu et ceci s'avère toujours actuel, que les étudiantes qui provenaient du secteur communautaire se sentaient très concernées par les aspects de la santé physique dans les différentes étapes du développement de la famille mais trouvaient difficile de percevoir également leur rôle dans une perspective de santé mentale. Elles éprouvaient aussi une difficulté à établir une relation d'aide sans passer nécessairement par le biais d'un soin ou d'un enseignement précis et de concevoir cette relation comme pouvant être à long terme. Par contre, chez les infirmières qui venaient du secteur de la psychiatrie, la relation d'aide à long terme était une dimension où elles se sentaient à l'aise tout en ayant cependant tendance à la voir dans l'optique du "one-to-one relationship." Pour ces dernières, s'arrêter à la santé physique ainsi qu'à l'aspect dysfonction familiale plutôt que pathologie psychiatrique constituaient des dimensions avec lesquelles elles se disaient, par ailleurs, moins familières. Ceci reflète bien, à mon avis, la réalité déjà mentionnée, soit une tendance à compartimentaliser les individus ainsi que les soins; tendance qui ne peut être maintenue lorsqu'il s'agit de travailler efficacement avec une famille. Comme le mentionnent Miller et Janosik (1980), les professionnels de la santé qui sont engagés dans les soins de la

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* A l'intérieur de cette période, cinquante étudiantes et un étudiant ont suivi le cours; seul le féminin sera donc utilisé dans ce texte.

famille doivent être préparés à composer avec un large éventail de facteurs physiques, psychologiques et sociaux. Souvent en faisant face à la maladie physique ou mentale, ils adhèrent à une distinction artificielle entre le physique et le psychosocial.

Le troisième et dernier facteur dont je veux maintenant traiter se rapporte à ma conviction d'enseignante à l'effet que tout apprentissage doit être expérientiel et signifiant, c'est-à-dire comme l'énonce Carl Rogers (1972), important pour la personne, significatif pour elle, d'une manière qui engage à la fois ses pensées et ses sentiments de même qu'il change quelque chose dans le comportement, les attitudes et peut-être dans la personnalité même de l'étudiant. Une des conséquences logiques de ceci était donc que ce cours ne soit pas obligatoire mais plutôt choisi par l'étudiante sur la base d'une motivation à réfléchir sur sa pratique actuelle ou future et un désir de prendre conscience de ses propres attitudes et valeurs qui influencent nécessairement sa conception de la famille de même que sa façon de travailler. Il en découlait également que je devais sélectionner un contenu de même que des méthodes d'enseignement à caratère didactique et expérientiel qui faciliteraient la poursuite de cette démarche de remise en question. C'est ce que je vais maintenant aborder.

Contenu théorique

La théorie générale des systèmes m'apparaît le cadre théorique le plus pertinent pour servir d'assise à une telle démarche. Depuis plusieurs années, cette théorie est utilisée pour l'étude de la famille; elle peut facilement être reliée à d'autres cadres théoriques de la famille et à des modèles conceptuels propres à la profession infirmière; une méthode de travail efficace et appropriée à l'infirmière peut en découler (Miller & Janosik, 1980; Clements & Roberts, 1983). La théorie générale des systèmes est applicable aux membres de la famille en tant qu'individus, aux sous-systèmes familiaux et à la famille en relation avec les institutions (Janosik & Miller, 1979). Egalement, la notion de la famille perçue en tant que système d'interaction, conception élaborée par le groupe des théoriciens de la communication (Bateson, 1972; Watzlawick, Helmick-Beavin, & Jackson, 1972; Watzlawick & Weakland, 1981) de même que l'approche structurale développée par Minuchin (1979), apportent d'autres éléments complémentaires et indispensables pour la compréhension du système familial.

La conception systémique que sous-tendent ces trois cadres de référence signifie, avant tout, une nouvelle manière de conceptualiser les problèmes humains (Liddle, 1980; Watzlawick & Weakland, 1981), une façon de percevoir l'homme dans son environnement (Minuchin, 1979; Montàgano, 1983; Wright & Leahey, 1984); une façcon de décrire les êtres humains "non comme des individus mais comme des personnes-en-communication-avec-d'autres-personnes" (Watzlawick et coll., 1972). La compréhension du système familial requiert l'observation des

membres en interaction (Goren, 1979) et l'intervention est centrée sur le processus que Satir (1971) identifie comme "la relation entre vous et moi, ici et maintenant."

Les principaux concepts qui découlent de ces trois cadres de référence constituent essentiellement le contenu enseigné, lequel est présenté dans le schéma qui suit.

Tableau 1

Schéma des points théoriques

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a) Système familial. Propriétés et principes: totalité et non-sommativité, équifinalité, circularité versus causalité linéaire, redondance, tendance homéostatique et capacité de transformation.

b) Communication au sein d'un système d'interaction: aspects: contenu et relation; modes: digital et analogique; principe de la définition de la relation; modèles d'interaction: symétrie et complémentarité; principe de la ponctuation dans l'interaction. Aspects dysfonctionnels de la communication.

c) Structure et fonctionnement du système familial: sous-systèmes, frontières, règles, répartition du pouvoir, lien avec l'extérieur, capacité d'identifier et de solutionner les problèmes*, répartition des rôles*, développement de rôles idiosyncrasiques*, développement de l'autonomie*. Aspects dysfonctionnels sur le plan de la structure et du fonctionnement.

d) Aspects du modèle de Roy qui peuvent être reliés au système familial**.

e) Rappel des stades de développement de la famille et de la notion de crises de maturation et de situation.

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* Les travaux de Guttman (1977), Epstein, Bishop et Levin (1978), sont particulièrement utiles pour l'étude de ces dimensions.

** La recherche de Ducharme (1982) est utilisée pour cette partie.

Les méthodes d'enseignement utilisées pour l'apprentissage de ce contenu théorique sont principalement de deux ordres; celles qui se rapportent davantage à la dimension cognitive (séminaires, bandes audio-visuelles) et celles qui sont plus directement reliées à la dimension expérientielle (sculpture familiale, simulation de familles). Je trouve important de préciser brièvement comment les techniques de sculpture familiale et de simulation de familles peuvent être des outils pédagogiques de première importance. C'est d'ailleurs ce qui ressort de façon constante lorsque les étudiantes évaluent cette première partie; la session de la sculpture est perçue comme un moment privilégié, faisant appel à la solidarité, à un respect mutuel et facilitant l'émergence d'une confiance envers le groupe. Quant aux sessions de simulation de

familles, elles les considèrent comme le moyen le plus "aidant" pour les préparer à l'intervention.

Duhl et coll. (1979) décrivent la sculpture familiale "comme un processus dynamique, actif, non linéaire, dépeignant les interrelations dans l'espace et le temps de manière à ce que les événements et les comportements soient simultanément perçus et vécus. Elle a pour but de mettre en scène les significations, les métaphores et les images des interrelations de manière à ce qu'elles puissent être partagées par tous, participants et observateurs. L'information n'est pas discutée mais expérimentée par l'action et l'observation." La technique comme telle peut présenter plusieurs variantes; ce n'est d'ailleurs pas de cet aspet dont je veux parler mais plutôt des facteurs qui me semblent déterminants dans le cadre du cours. L'animateur de la sculpture, invité pour la circonstance, est un clinicien chevronné, capable de saisir et de respecter le rythme du groupe, de témoigner chaleur et empathie. Sur le plan chronologique, je situe cette expérience vers la fin de la partie théorique; les principaux concepts ont donc été abordés, les étudiantes commencent à se connaître et ont appris à fonctionner ensemble. Une seule étudiante (une qui veut s'engager sur un plan personnel et qui obtient l'accord du groupe) fait la sculpture de sa famille d'origine seulement; les autres participent comme acteurs incarnant les membres de cette famille ou en tant qu'observateurs. Le fait de ne pas être l'animateur me donne la possibilité de vivre le processus à un niveau similaire à celui des étudiantes de même que cela me permet de jouer, si le "sculpteur" me le demande, un membre de sa famille assez souvent en l'occurence la mère ou la soeur ainée. Après l'expérience, la tâche que je considère essentielle est d'être disponible et à l'écoute des besoins des étudiantes particulièrement de l'étudiante qui a été le "sculpteur".

Selon Mealy (1977), la sculpture est un moyen expérientiel utile pour stimuler le développement d'une prise de conscience de soi et de ses modes de relation. Après cinq années d'utilisation, il m'apparaît que de fait, cette session a comme principal effet de concrétiser et de démontrer, en quelque sorte, l'importance et la pertinence d'entreprendre ou de poursuivre une telle démarche de réflexion. S'arrêter à son vécu au sein de sa famille d'origine et de sa famille actuelle, prendre conscience des règles et valeurs transmises, revoir ses conceptions de la normalité et de la non normalité des comportements, tout ceci est de l'ordre d'une démarche nécessaire lorsque l'on a comme objectif de travailler de façon thérapeutique avec des familles. C'est, cependant, une démarche continue qui doit être faite par l'étudiante, de façon personnelle, à son propre rythme et selon la profondeur dont elle est capable à ce moment.

A un autre niveau, la sculputre familiale aide les étudiantes à conférer une signification à des notions qui peuvent être très théoriques et imprécises entre autres, les aspects multidimensionnels d'un système familial, l'interdépendane entre les

membres, la diversité dans les perceptions, l'importance du non verbal.

Quant à la simulation, comme elle est une technique souvent utilisée en enseignement, je vais m'en tenir à des points très spécifiques. A tour de rôle et pour préparer un jeu d'environ dix minutes, chaque étudiante doit décrire la situation d'une famille fictive: elle doit préciser qui sont les membres de cette famille, la nature de leur relation, le problème qui les incite à demander de l'aide, comment elle est amenée à prendre soin de cette famille, de quel moment de l'intervention il va s'agir. La façon dont l'étudiante-intervenante va décrire les relations et le problème de la famille constitue un indicateur non négligeable de son niveau actuel de connaissances. Les autres étudiantes vont choisir d'être tel ou tel membre de cette famille. Ceci décidé, je demande à l'intervenante de sortir quelques minutes afin que les acteurs puissent déterminer la façon dont ils entendent jouer la rencontre. Très souvent, le groupe se fait alors un malin plaisir "de mêler les cartes"; la mère conciliante que l'intervenante avait décrite, va s'avérer à l'usage avoir beaucoup moins de bonne volonté que ce qu'elle avait prévu...

Le jeu terminé, je trouve important de m'arrêter à ce que l'intervenante vient de vivre, de lui demander de préciser les objectifs qu'elle poursuivait, de lui demander de vérifier auprès des individus qu'elle voulait plus spécifiquement aider s'ils se sont réellement senti aidés et sinon, de quelle façon ils auraient pu l'être. Le jeu me donne aussi un aperçu des possibilités et des difficultés de l'intervenante. Beaucoup de points théoriques peuvent être repris à la lumière de ce qui vient de se vivre; très souvent les acteurs ont expérimenté en quelque sorte ce que signifie être dans une famille où la communication est difficile, les règles rigides ou encore comment le comportement d'un membre va déterminer le comportement des autres. Finalement, je puis dire que c'est le moment et le lieu où les étudiantes expriment leurs craintes de ne pas être suffisamment "aidantes", leur anxiété face à l'inconnu que constitue toute première rencontre. Avec les années, la place accordée à cet exercise est devenue de plus en plus grande par rapport à l'ensemble de la partie théorique.

Application clinique du concept

L'aspect clinique de l'expérience consiste essentiellement à intervenir auprès d'une famille en difficulté. L'intervention est faite au domicile de la famille, sur la base d'une rencontre par semaine (lorsque les circonstances le requièrent, ceci est évidemment modifié). La durée de l'intervention est en fonction des besoins de la famille, du problème et des objectifs de soins poursuivis. Cependant, comme il s'agit d'une intervention axée sur la situation de crise ou la résolution d'un problème spécifique, une moyenne de dix rencontres a été la norme habituellement utilisée.

Depuis le début de l'expérience, les situations dans lesquelles les étudiantes sont intervenues ont été celles de familles en crise à la suite de la naissance d'un enfant ayant un handicap physique ou mental, de familles éprouvant de sérieuses difficultés à cause d'une maladie physique ou mentale, d'une hospitalisation à long terme ou du décès d'un de leurs membres. Il y a eu également des situations où il s'agissait de parents ayant un problème dans l'exercice de leur rôle soit lors de la naissance d'un enfant, soit à la phase de l'adolescence, de même que des situations où des conjoints avaient des difficultés à vivre les périodes de la retraite et du vieillissement. Ces familles nous sont habituellement référées par des CLSC, DSC, CHLD, cliniques externes de psychiatrie, services de maintien à domicile. Je veux souligner que toutes les familles dont nous nous sommes occupées avaient, comme dénominateur commun, un besoin d'aide au niveau de la relation entre les membres. Ce qui n'exclut pas que dans beaucoup de ces situations, les besoins se situaient également sur le plan de soins physiques à recevoir, d'informations et d'enseignements en matière de santé et d'habitudes de vie. Ainsi, en restant très ouvertes aux dimensions bio-psycho-sociales, lesquelles font forcément partie d'une approche infirmière globale, les étudiantes sont amenées à tenir compte et à faire face à la diversité des besoins présentés par les membres d'une famille ainsi qu'à l'ampleur et la complexité des soins requis. Cela les aide également à préciser, à qui s'interroge sur cette question, la distinction entre l'approche infirmière et la thérapie familiale. Pour ma part, j'ai établi d'autres paramètres qui me sont utiles pour déterminer et maintenir cette distinction. Outre les différents types de besoins en cause et le genre de situations choisies, il y a également le contexte de l'intervention laquelle s'exerce dans le cadre des activités régulières de la famille et la poursuite d'un changement en regard de comportements et d'expériences de vie très spécifiques.

Lors de l'application clinique, l'apprentissage de l'étudiante consiste prioritairement à l'acquisition d'habiletés reliées à la notion même de système familial; l'étudiante ayant déjà des habiletés inhérentes à la relation d'aide individuelle, aux principes de la collecte des données et de la planifiation d'un plan de soins. Avec le recul, je considère donc que l'apprentissage doit surtout porter sur l'observation et l'évaluation du système familial, sur l'identification et la définition du problème dans une perspective systémique et sur l'intervention axée sur le processus. Ces trois habiletés sont difficilement séparables dans la réalité de la pratique car elles s'exercent de façon continue; cependant, pour fins d'explication, je vais les décrire de façon distincte, l'une après l'autre.

Par l'observation et l'évaluation du système, j'entends que l'étudiante doit développer la capacité d'observer le "comment" les membres sont en interaction les uns avec les autres dans le contexte de la rencontre de même que la capacité de donner un sens à ces observations en se référant aux constituantes des

concepts "structure et fonctionnement d'un système d'interaction" (cf. schéma b et c). Ainsi que le précisent Watzlawick et Weakland (1981), "la famille est un système régi par des règles, ses membres se comportent entre eux d'une manière répétitive et organisée et ce type de structuration des comportements peut être isolé comme un principe directeur de la vie familiale." En observant et explorant les modes d'interaction, l'infirmière devient plus en mesure d'identifier tant les forces que les faiblesses du système sur le plan de sa structure et de son fonctionnement.

Ce n'est pas une tâche facile; au début, les étudiantes ont souvent l'impression qu'elles n'observent pas les points essentiels ou encore qu'elles se laissent facilement submerger par un flot d'échanges verbaux et non verbaux entre tous ces individus sans nécessairement en percevoir ni l'importance ni le sens. Une contre-réaction à ceci peut être alors de vouloir contrôler la situation à un point tel qu'il n'y a plus de place pour l'observation mais uniquement pour un questionnaire adressé au membre avec lequel l'étudiante se sent le plus à l'aise afin que celui-ci raconte les événements survenus et le mode de vie de la famille. Accepter de ne pas tout savoir ni tout comprendre, avec l'anxiété que nécessairement cela suscite, est un apprentissage combien significatif lorsque l'étudiante commence une relation avec une famille.

L'identification et la définition du problème dans une perspective systémique constitue un autre apprentissage qui m'apparaît fondamental car la manière dont le problème est conceptualisé influence nécessairement la nature de l'intervention (Tomm & Wright, 1979). Cela sous-tend de désapprendre à penser en terme de causalité linéaire donc d'abandonner la vision mécaniste-causale des phénomènes pour les percevoir plutôt dans une perspective de circularité. La circularité est une notion majeur dans l'approche systémique. Tel que le soulignent Palazzoli Selvini et coll. (1979) "le comportement d'un membre de la famille influence inévitablement le comportement des autres; toutefois il est épistémologiquement erroné de considérer le comportement de ce membre comme la cause du comportement des autres membres et cela, parce que chaque membre influence les autres mais est aussi influencé par eux." De façon plus concrète, cela va signifier d'après Haley (1979) que "les membres d'une famille disent habituellement qu'une seule personne constitue le problème et la tâche du thérapeute est de penser en termes de plus d'une personne." Toujours selon Haley, "il pensera donc au problème d'une manière différente des membres de la famille mais il n'a pas à les convaincre de sa formulation. Il doit accepter ce qu'ils disent et sembler les suivre mais dans sa tête il pensera au problème à sa manière." Cette façon de voir est susceptible d'aider l'étudiante à mieux saisir l'importance de la présence de chaque membre et la nécessité d'explorer avec chacun comment il contribue à la situatin problématique; la perception de la fonction du problème au sein de ce système sera alors possible.

Apprendre à intervenir au niveau du processus est une autre habileté. Cela n'exclut nullement la nécessité de tenir également compte du contenu. Toutefois, cela signifie que le contenu (ce qui est dit par les membres) ne devient pas le point unique qui guide l'intervention de l'infirmière mais également la compréhension et l'utilisation du "ici et maintenant" c'est-à-dire de ce qui se passe avec elle, à ce moment, dans ce lieu et dans ce contexte. En se basant sur ces observations du système en action, l'infirmière intervient de façon stratégique afin de changer les modes d'interation moins fonctionnels en modes qui supportent le développement de nouveaux comportements et l'émergence d'une expérience de croissance personnelle pour chaque membre (Goren, 1979). De façon plus opératoire, cela consiste entre autres, à s'arrêter à l'aspect non verbal des messages, à identifier et à souligner la concordance ou la non concordance entre le verbal et le non verbal, à aider chaque membre à vérifier systématiquement ses perceptions, à aider chacun à identifier, préciser et exprimer les sentiments qu'il ressent à ce moment-la, à aider chacun à métacommuniquer verbalement c'est-à-dire parler de sa relation avec les autres membres. L'infirmière doit elle-même être capable de communiquer de façon claire et concise, de métacommuniquer verbalement car elle demeure consciente de ses sentiments et de ses réactions envers la famille. Elle est aussi suffisamment consciente du rôle non dit que les membres voudraient lui faire jouer et de leurs demandes d'alliance et de coalition pour utiliser ces phénomènes afin de favoriser un changement dans le système.

Il s'agit donc de ne pas se laisser piéger par le contenu lequel se situe à un seul niveau de la rencontre. C'est un procédé difficile. Goren (1979) décrit la difficulté de la façon suivante: une tendance naturelle est de rechercher la vérité ou de décider qui est "correct" lors de l'écoute des témoignages discordants des membres de la famille. Il n'existe pas, bien entendu, une telle vérité ou peut-être qu'il est plus exact de dire qu'il y a autant de vérités qu'il y a, au sein du système, des gens qui perçoivent et rapportent. Le sentiment familier d'avoir recueilli un flot d'informations ou de se sentir coincé sans savoir ce qui doit être fait avec tout ceci est une indication certaine que l'intervenant a cessé de se concentrer sur le processus et s'est perdu dans un labyrinthe de contenu.

Supervision

La supervision est un aspect majeur de l'ensemble de l'expérience, supervision que je considère avant tout, comme une méthode d'enseignement devant faciliter l'apprentissage du "comment" intervenir avec la famille. La supervision se déroule selon les modalités suivantes: en premier lieu, je demande aux étudiantes de se répartir en groupes de trois et de participer à chaque semaine, et ce pour chaque groupe, à une session d'une durée de trois heures (pour un total d'environ 45 heures par

groupe). Avant d'assister à la session, chaque étudiante doit avoir rédigé le compte rendu de sa rencontre avec la famille, identifié les thèmes dominants, déterminé les séquences qu'elle considère importantes. Réviser les objectifs et le plan d'intervention, déterminer de nouvelles hypothèses de travail, réfléchir sur sa façon d'être avec la famille, identifier ses sentiments et réactions face aux comportements des membres de la famille, relier les phénomènes observés lors de l'intervention à des concepts pertinents sont les points centraux de chaque session.

Cette forme de supervision par groupe de trois étudiantes, peut présenter certains inconvénients; cependant les avantages m'apparaissent suffisamment importants pour que je trouve la formule bien adaptée à l'apprentissage d'une intervention, laquelle est elle-même axée sur plusieurs individus. Par ces avantages, j'entends la possibilité pour les étudiantes d'apprendre les unes des autres, la nécessité de se faire graduellement confiance, l'obligation pour chacune de "faire sa place" au sein du groupe. Pour moi, en tant que superviseur, cette formule me permet d'observer le mode de relation des étudiantes non seulement avec moi mais également avec leurs collègues; les étudiantes peuvent aussi observer ma façon d'être et d'intervenir au sein de ce système d'interaction que nous constituons. Tout ceci signifie que non seulement le contenu de la supervision mais aussi le processus comme tel devient très important pour l'apprentissage de la même façon d'ailleurs qu'il l'est, comme nous l'avons vu précédemment, lors de l'intervention famille-étudiante. Le parallèle ne s'arrête pas là; tout comme l'étudiante doit graduellement tenter de le réaliser avec la famille, le superviseur doit être en mesure de faire vivre à l'étudiante une expérience de supervison où il existe un climat de non jugement, une disponibilité envers chacune, une liberté et une spontanéité dans les échanges, le respect du rythme de chacune, le respect des différences, la mise en évidence des aspects positifs de chaque individu. Comme le mentionne Braverman (1982), l'apprentissage prend place dans le contexte d'une relation entre l'enseignante et l'étudiante; quand cette relation n'est pas "nourrissante et supportante", l'apprentissage est entravé.

En dernier lieu, je trouve important d'aborder brièvement certains aspects qui ressortent à chaque année lorsque les étudiantes font l'évaluation de l'expérience ainsi que des apprentissages effetués. Bien qu'elles soulignent le court laps de temps alloué à l'expérience, les trois modalités pédagogiques utilisées sont perçues aussi essentielles les unes que les autres. L'amorce ou la poursuite d'une démarche de réflexion personnelle sur leur propre système familial est un élément très souvent mentionné. C'est d'ailleurs un aspect qui leur apparaît fondamental pour travailler efficacement avec des familles. Au delà du strict contenu enseigné, contenu qu'elles considèrent dense et approprié, les étudiantes accordent une grande importance au climat du cours en termes de se sentir en confiance, soutenues et respectées dans leurs différences. Sur le plan des habiletés à développer, elles mentionnent le plus souvent des acquis au niveau

de l'évaluation du problème dans une perspective systémique, l'amélioration de leurs capacités d'observation et de leur façon de communiquer ainsi que l'augmentation de leurs habiletés pour intervenir au niveau du processus de la rencontre.

Je tiens également à mentionner combien, en tant qu'enseignante, cette expérience est enrichissante et stimulante: elle signifie une remise en question au point de vue professionnel et personnel, elle fait appel à des habiletés diverses et elle s'inscrit dans un domaine complexe, en évolution et très actuel sur le plan de la pratique infirmière.

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ABSTRACT

A teaching experience in nursing: The concept "family system" and a family intervention

This article describes a five-year teaching experience of a course in a Master's programme in Nursing. After identifying considerations and factors which determined the nature of the course, the author presents the chosen theoretical orientation and the main theoretical constructs which are taught. Because of their relatively unusual character, their experiential aspect and their great importance, the two teaching methods, family sculpting and family simulating, are discussed in detail.

For the clinical application of the concept, the author specifies the three skills that she considers the most fundamental for intervening with a family system. Finally, the supervision, an important part of the course is underlined as being, more than anything else, a form of teaching. Specifically pointed out is the parallel between the "façon d'être" of the supervisor with the students and that of the student with the members of the family she wishes to help.

DIFFERENCES IN COMMUNICATION BEHAVIOURS OF SHY AND NON-SHY STUDENT NURSES IN SITUATIONS WITH EVALUATIVE POTENTIAL

Helen M. McKinstry

Communication experts have been aware for some time that shy persons have varying degrees of difficulty interacting with others in social situations (Buss, 1980; Friedman, 1980; McCroskey, 1981; Pilkonis, 1977(a), 1977(b)). In nursing, effective communication is essential because the execution of all phases of the nursing process depends on the data obtained and transmitted in client-nurse interactions. The quality of nursing care can be diminished if a nurse's ability to use communication skills is inhibited or deficient. Thus, the demonstration of skill in communication is a high-priority objective of most nursing programs. The implication, for nursing educators, is that early diagnosis of problems through careful evaluation in the clinical area is necessary, so that remedial action may be instituted.

The objective evaluation of nursing skills in the clinical area is a common concern of nursing teachers. It is particularly difficult to assess the skills of shy, retiring students. Their tendency to avoid the teacher's scrutiny makes determining the extent to which their shyness may decrease effective communication with their patients more difficult. Although communication experts have studied the relationships between shyness and inappropriate communication behaviours in various student groups, it has not been a topic for consideration in nursing research (Amatu, 1981; McCroskey, 1977; Pilkonis, 1977(a); Zimbardo, 1977).

The purpose of this study was to investigate the relationship between shyness and the ability of student nurses to demonstrate communication skills in the practice area. Since shyness behaviour increases when the individual perceives that evaluation is taking place (Buss, 1980; Pilkonis, 1977(a)), and because teachers frequently use direct observation as a data source for evaluating skills, the scope of the study was limited to the effects of the teacher's evaluative role on the student nurse's ability to demonstrate communication skills when interacting with assigned patients in the clinical area. The questions that were identified for study were:

(1) Is there a correlation between degrees of shyness among student nurses and differences in their ability to demonstrate communication skills in the clinical area?

(2) Is there a difference in their communication ability when the situation varies in evaluative potential?

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Review of the Literature

The behaviours used by shy individuals to avoid the subjective discomforts experienced when situations increase their feelings of shyness have been widely documented in the literature (Amatu, 1981; Friedman, 1980; McCroskey, 1980; Pilkonis, 1977(a), 1977(b); Zimbardo, 1977). One of the outstanding characteristics of shyness is communication apprehension (CA); a fear or anxiety associated with real or anticipated communication with other persons (Harris & Brown, 1982; McCroskey, 1970; McCroskey, Simpson, & Richmond, 1982). This fear results in a tendency to avoid other people, to respond inappropriately, and to feel nervous and anxious when interactions cannot be avoided (Pilkonis, 1977(b)). In addition, when interactions involve an authority figure, shy persons tend to become more distressed and less able to communicate (Buss, 1980; Zimbardo, 1977).

Buss (1980) describes three categories of social situations that contribute to feelings of shyness and increased shyness behaviours. These three categories: novelty in social situations, the presence of others (especially of higher status or authority), and the actions of others, can readily be identified in the clinical area where the nursing student practices newly acquired skills.

In addition to inhibition of communication ability, there is concern that shyness may interfere with the learning process, thereby decreasing the amount of knowledge that can be applied in practice. Zimbardo (1977) claims that classroom learning largely results from verbal interaction and that shy students learn less because they avoid interactions with the teacher that facilitate individualized teaching. McCroskey and Anderson (1976) found that high CA students had lower grade point averages and scored lower on the American College test, especially on the sub-tests requiring high interaction. If the acquisition of communication theory is thus inhibited by shyness, nursing students affected may have less theoretical background than their non-shy peers, and may, therefore, be less able to demonstrate the level of communication skill required by the program.

Method

Subjects

Fifty-three Diploma nursing students were selected from a community college nursing program in a major city of Ontario, Canada (N246). Both classes of the program were equally represented in the sample. Subjects were chosen on the basis of their clinical assignment to two medium sized community hospitals and one nursing home, which were more readily accessible for research purposes. Data were collected to ascertain that the sample was representative of the population of nursing students from which they were selected. Comparisons of mean age,

Otis-Lennon (Form J) pre-admission scores, proportion of male and female students, the nature of the clinical areas, and years of teacher experience for the sample and residual groups suggested that the probability of real differences between the groups was very small.

Instrumentation

Two instruments were used to measure levels of student shyness and communication apprehension. The Shyness Scale (SHY) is a 14 item, five choice Likert-type rating scale with reported high reliability (McCroskey, Anderson, Richmond & Wheeless, 1981). A fifteenth, free response item was added which asked students to identify any specific situations in the clinical area that increased their shyness.

The Personal Report of Communication Apprehension-24 (PRCA-24) was also designed by McCroskey (1981). It is a 24 item, five choice Likert-type measure which has consistently produced reliability estimates of .90 and above (McCroskey, 1978). McCroskey (1978) reports a number of studies that support his claim for predictive and construct validity of this instrument.

Two rating scales of 10 five-choice items were developed to obtain patient and teacher perceptions of the students' communication behaviours. The items for the Patient Feedback Scale (Table 1) and Teacher Feedback Scale (Table 2) were constructed using accepted criteria for effective communication skills. A panel of judges were asked to inspect the items for face validity. The inability to demonstrate these criterion behaviours has been attributed to shyness (Buss, 1980; Friedman, 1980; MacKay, 1973).

Procedures

Permission to enter the clinical area was obtained from directors of nursing in the clinical agencies, the chairman of the Diploma Nursing Program and the clinical teachers. Students and patients were interviewed to request their co-operation, to explain the purpose of the project, and to emphasize the confidential nature of responses and study results.

Patient feedback scales were completed for each subject, on two occasions, by two patients. The first observation (PF1) sampled behaviours which occurred when the students communicated privately with the patient. The second observation (PF2), made about a week later, sampled behaviours when the situation was potentially evaluative in nature; that is, in the presence of the teacher and/or investigator. Following the second observation the students completed the PRCA-24 and SHY and their teachers completed the Teacher Feedback Scale.

In addition, the PRCA-24 and SHY were administered to the

remaining students in the nursing program, so that a comparison could be made of the incidence of shyness and communication apprehension in the study group and the residual group.

Statistical Procedures

The data were analysed using descriptive statistics and correlational procedures.

SHY and PRCA-24 scores. Means and standard deviations were computed to provide information about the distribution of shyness and communication apprehension in the study and residual groups. Means were subjected to Chi-square testing to determine if differences between them were real, or could be accounted for by sampling variability.

Pearson Product Moment Correlation coefficients were calculated to assess the correlation of CA and shyness, and the similarity of the relationships in the study and residual groups.

PF1, PF2 and TF scales scores. Between item correlations were calculated for each of the two samples of PF scores and for the TF scores. The Spearman-Brown formula was applied to determine Coefficient Alpha (2) of the instruments.

Pearson Product Moment Correlation Coefficients were computed for PRCA-24, SHY, PF1, PF2 and TF scores to obtain information about possible relationships among the tests.

Free response item 15 (SHY). Situations that students identified as shyness-provoking were tabulated and classified according to the categories identified by Buss (1980, p.189). The distribution of situations was examined, and the frequency of occurrence was calculated for the total group. The extremely shy and communication apprehensive (defined as scores of 1SD above PRCA-24 mean and 1SD below SHY mean) were identified and the distribution compared to the total group.

Results

Descriptive statistics. (PRCA-24, SHY, PF1, PF2, TF)

The PRCA-24 raw scores ranged from 33 to 118 in the study group with a mean of 62.8 and S.D. of 16.92 (Table 1). The scores of the residual group ranged from 27 to 98, mean 60.52 and S.D. 16.53.

The greatest range possible on the PRCA-24 is 24 to 120, high scores reflecting high communication apprehension. The scores obtained in both groups demonstrate a distribution of students with varying degrees of CA and, using McCroskey's criteria for extreme

communication apprehension (ISD above the mean), a proportion of each group with extreme CA could be identified.

Shy scores ranged from 15 to 70 in the study group and from 17 to 70 in the residual group. The sample mean was 42.46 with a SD of 13.03. The residual group mean was 42.2 with a SD of 11.51 (Table 1). Low scores indicate high levels of shyness. As with the CA scores, there were similar distributions of shy scores in both the sample and residual groups, with a proportion of scores one standard deviation below the mean, indicating some extremely shy individuals.

The descriptive data for the Feedback Scales are reported in Table 2. There was no appreciable variance between the means and standard deviations which ranged from PF2: X16.84, SD5.49; PF1: X18.41, SD5.34; and TF: X21.57, SD5.09.

Chi-square. Values for scores on the PRCA-24 and SHY for the study and residual groups are presented in Table 3. The small differences indicate that both samples came from similar populations, and that the differences can be accounted for by sampling variability.

High scores on the PRCA-24 were associated with low scores on SHY resulting in a correlation coefficient for the study group of -.62 (p .005, n-50), and -.58 (P .005, n-141) for the residual group. These results indicate that the shier the individual, the more apprehension is experienced when communicating with others.

Among measure Pearson Product Moment Correlations were not significant. The high correlations anticipated between PF2 and TF did not occur, nor did the lower correlations of PF1 to PF2 and TF (Table 4).

A high correlation between TF and PF2 scores might have suggested that since the teacher was present in both instances, the student demonstrated communication behaviours that could be observed by both patient and teacher. A lower PF1 correlation might have suggested that behaviours observed by the patient were different when the student communicated privately.

The Coefficient Alpha, as determined by the application of the Spearman-Brown formula to between item correlations, indicated that the items were sampling communication behaviours as intended (PF1, .77; PF2, .84; TF, .84.

Free response item 15 (SHY)

Thirty-seven subjects in the study group (N-52) identified 56 situations that increased their shyness. Eighty-three students in the residual group (N-153) identified 108 situations for a total of 164 (Table 5).

Table 1

Study and Residual Group Minimum and Maximum Scores, Means, Standard Deviations, and Standard Error on the Personal Report of Communication Apprehension (PRCA-24) and the Shyness Scale (SHY)

	Minimum Score	Maximum Score	Mean	SD	SE	n
Study Group						
PRCA-24	33a	118	62.58	16.92	2.35	52
SHY	15b	70	42.46	13.03	1.84	50
Residual Group						
PRCA-24	27	98	60.52	16.53	1.35	151
SHY	17	70	42.20	11.50	.96	143

a High score indicates high communication apprehension.
b Low score indicates high shyness levels.

Table 2

Minimum and Maximum Scores, Means, Standard Deviations, and Standard Error Values for Patient Feedback (PF1, PF2) and Teacher Feedback (TF1) Scores

	Minimum Score	Maximum Score	Mean	SD	SE	n
PF1	10a	31	18.41	5.34	.75	51
PF2	10	33	16.34	5.49	.86	41b
TF	10	36	21.57	5.09	.70	53

a Most effective communication = 10
Least effective communication = 50

b A change in patient population and absences from the clinical area account for variation in sample size.

Table 3

Chi-square Values for PRCA-24 and SHY, for the Study and residual groups.*

PRCA-24

Group	High CA	Low CA	Totals	X (1df, P. < .5)
Group	20	32	52	.4874
	22.05	29.95		
Residual	66	85	151	
	63.95	87.05		
	86	117	203	

SHY

Group	SHY	Non-Shy	Totals	X (1df, p. < .5)
Study	30	20	50	.7491
	27.45	22.55		
Residual	76	67	143	
	78.55	64.45		
	106	87	193	

*Yates correction for continuity employed.

Table 4

Pearson Product Moment Correlations between Variables PRCA-24, SHY, Patient Feedback Scales, First and Second Observation (PF1, PF2), and the Teacher Feedback Scale (TF).

	PRCA-24	SHY	PF1	PF2	TF
PRCA-24		-.62	-.01	.22	.03
SHY			.09	.10	-.16
PF1				.07	.20
PF2					-.06
TF					

When classified according to Buss's (1980) categories, most of the situations related to the "Presence of Others" category (75), especially situations involving persons of higher status. In the "Novelty" category, 65 situations were identified. Again, social events, such as meeting new patients and dealing with patients of the opposite sex, were identified more frequently (39) than adapting to the physical environment (13) or performing role-related activities (13).

The "Actions of Others" category contained the fewest comments (21). Excessive attention by others was cited most frequently (16), while too little attention and intrusive behaviour by others were identified as increasing shyness in five comments.

There were 10 students in the study group (N-52), and 34 students in the residual group (N-153) whose scores indicated extreme communication apprehension and shyness (ISD above or below the mean). These students identified similar types of situations in the various categories as the total group.

Discussion

An intriguing question arising from the results of this study concerns the lack of variability in the scores of the instruments measuring observable communication behaviours. A

Table 5

Classification and Frequency of Student Responses to Item 15 (SHY) According to Categories Identified by Buss.

	All Students		High SHY + CA	
	Study N=37/52	Residual N=83/153	Study N=5/10	Residual N=20/34
I. Novelty				
a. Physical (New Ward)	6	7	0	1
b. Social				
-New Patients	6	20	2	3
-Opposite Sex	8	5	1	2
c. Role				
-New Procedure	5	7	1	0
-Embarrassment	1	0	0	0
II. Presence of Others				
a. Formal Situations -e.g. Public Speaking	2	10	1	2
b. Status				
-Doctor	3	10	0	4
-Head Nurse	1	1	0	0
-Teacher	6	14	3	4
-Other Staff	7	10	1	6
III. Actions of Others				
a. Excessive Attention	7	9	1	5
b. Too Little Attention	1	2	0	0
c. Intrusiveness	0	2	0	0
TOTALS	56	108	11	27

number of students reported varying degrees of shyness and communication apprehension. These students said that they were shy; they admitted that they were apprehensive when communicating; they identified specific instances that increased

their shyness and they particularly noted situations in which authority figures were involved. Yet, the observations made by patients and teachers in evaluative situations did not significantly differ from observations made by the patient when the student communicated with them privately.

Since the instruments used to assess levels of communication apprehension and shyness have consistently demonstrated reliability and validity, there is a good possibility that shyness, in fact, did have an influence on communication ability. Possibly this was not demonstrated in the study because of other influencing factors. Some of these influences could have included sampling limitations, reliability of reporting by patients and teachers, lack of overt behaviours reflecting CA by students, or deficiencies in measurement.

Sampling limitations. Non-randomization of selection was recognized, at the onset, as a source of potential problems. However, support for the probability that no real differences existed in the study and residual group was obtained from comparing demographic and pre-admission test data, descriptive data from the PRCA-24 and SHY scores, and Chi-squared values for the PRCA-24 and SHY. There was an adequate distribution of shy and non-shy students in both groups, in proportions similar to those estimated by McCroskey, Daly, and Sorenson (1976) as a result of previous research with groups of college students in the United States.

Reliability of reporting. The patient, as a data source, was of questionable reliability. The problem was manifested by the lack of variability in PF1 and PF2 scores. Several explanations are plausible. First, there is a natural reluctance to "report" on others. Secondly, the research process may not have been well understood, so that participants were not confident enough to be candid. Again, the patient role is a dependent one which patients may not be willing to jeopardize by talking about their care-givers. Finally, some patients may not have perceived a need to communicate on other than a superficial level, or they simply didn't recognize ineffective behaviour.

The lack of variability in TF scores is also interesting. Why was there so little difference between scores for different students? It may be that shy and non-shy students may be able to communicate equally well in private, or with the teacher present, because of teaching and practice they have experienced prior to clinical assignment. It may also be that teachers vary their expectations depending on the proximity of the student to graduation. The teacher may feel that shyness will decrease with further experience, and so makes allowances for the shy student. Finally, because of time or other constraints in the clinical area, the evaluation of communication skills may be based on inference rather than direct observation.

Student behaviours

Although teachers and patients did not seem to notice a difference in behaviour, nursing students in this study reported that social or interpersonal situations in the clinical area increased their shyness more than being exposed to a new environment. The student role permits unfamiliarity with new clinical areas, but does not allow differences in the quality of care provided for the patient. Thus, interacting with patients and staff is more stressful for the student. Also, the structural sameness of nursing units facilitates orientation, and, in addition, students may develop strategies to assist this process. Students identified authority figures more frequently than any other factor as a source of increased shyness: a result not manifested in observable behaviours, or, if it was, not recognized by either patients or teachers. It may be that students make an extra effort to exhibit appropriate behaviour in order to make a good impression in evaluative situations.

Deficiencies in measurement

The PF and TF scales were developed for this study and had not been previously tested. Although the Spearman-Brown test suggested that the instruments were measuring the intended behaviours, further testing is necessary to determine reliability and validity. Since students were in the clinical area only two days a week, a time lapse occurred between the two samplings that may have had an effect on results. In addition, it was necessary to use different patients for the two samplings of behaviour. This may also have influenced the efficiency of the instruments.

Conclusion

The literature related to shyness provides evidence that communication apprehension can result in poor communication skills in the shy person. This is particularly true when shyness and communication apprehension are severe. Since communication plays an important role in providing quality nursing care, failure to succeed in nursing because of poor communication skills may be rooted in shyness.

Although the data obtained in this study did not support the hypothesis implied in the research questions, results indicated a distribution of students who rated themselves as extremely shy and communication apprehensive, and who identified situations in the practice area that increased their feelings of discomfort. The lack of correlation of data related to their communication behaviours suggests that there may be obstacles to collecting objective information about student behaviours in the clinical area. This is a matter of concern for both students and teachers.

Further study is needed in the practice area in order to develop

a variety of approaches and methods to gather evaluative data. Reliability of patient responses appeared to be a problem. Therefore, additional or alternate data sources should be investigated, such as self-reports, nursing care plans, problem oriented recording, and nursing personnel.

At the present time there is no formal mechanism in the nursing program to diagnose causes of poor communication skills. Until better methods are developed, teachers should continue their efforts to identify instances where shyness interferes with communication ability, and to assist these students by appropriate counselling and referral.

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RÉSUMÉ

Aptitudes a la communication: Différences de comportement chez les étudiants infirmièrs timides et non timides dans des situations présentant un potentiel d'évaluation

Cinquante-trois étudiants d'un programme de diplôme en sciences infirmières d'un collège communautaire ont été étudiés dans le but de préciser l'étendue de la corrélation entre les niveaux de timidité et les différentes aptitudes à communiquer dans le domaine clinique et de déterminer les différences entre les étudiants timides et les étudiants non timides au niveau des aptitudes à la communication, quand ils se trouvent dans des situations présentant un potentiel d'évaluation. Le rapport personnel d'appréhension de la communication (Personal Report of Communication Apprehension-24 (1981) ou PRCA-24) et l'échelle de timidité (Shyness Scale, SHY) ont été administrés afin d'évaluer l'anxiété de communication et les niveaux de timidité. Les échelles de rétroaction du malade et du professeur ont été conçues pour évaluer les comportements liés à la communication. Les résultats confirment qu'une partie des étudiants étaient timides et (ou) qu'ils manifestaient une appréhension de communication; cependant, les corrélations entre l'échelle de rétroaction du malade et du professeur n'ont pas confirmé les hypothèses proposées dans les questions de recherche. On a conclu que les résultats avaient pu être influencés par les limites de l'étude de même que par la complexité des rapports dans le domaine clinique, mais que la nécessité d'une évaluation objective des aptitudes à la communication en sciences infirmières justifie la poursuite des travaux, en faisant toutefois appel à des démarches et à des méthodes différentes.

SOURCES AND EFFECTS OF ANXIETY IN VIDEOTAPE LEARNING EXPERIENCE

Tamara Zujewskyj . Louise Davis

The third year of the generic baccalaureate nursing program at the University of Alberta appears to be a very stressful year for the students. Pre-examination assessments, conducted in September 1980, indicated that many students experienced high levels of anxiety that were associated with writing examinations. Informal data collected from third year students in December 1980 and December 1981, on self reported anxiety levels, showed that these students also experienced high levels of anxiety during their clinical postings. Anxiety is equated in the literature with significant levels of stress (Lazarus, 1976).

Lazarus identifies stress as an internal force which develops within an individual in response to demands which tax or exceed adjustive resources (1976, p.47). Stress is a subjective experience which may have positive or negative effects, and is particular to the specific situation and the individual's capacity to adapt. Although stress is at times essential for growth, it can also be "destructive of effective adjustment" (Lazarus, 1976, p.71). The main deterrents to adjustment, according to Lazarus, are the emotional overtones that characterize stressful situations. Anxiety is the most significant of the stress emotions. In extreme amounts it prevents the individual from coping with problems, prevents learning and emotional growth, and impairs a person's adjustive functioning.

The study reported in this article was intended to identify and categorize the sources of stress reported by third year baccalaureate nursing students, so that educators working with them could evolve methods to lessen the stress experienced or alleviate its consequences.

Literature Review

A major study by Fox and Diamond (1965) identifies four areas of life in which a nursing student may experience stress. They are: personal, social, academic, and clinical. The following summary of research is divided into these four main categories.

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Personal: Stresses experienced by the nursing student in the personal area are those related to the growth, development and maturity level of the student, and involving emotional and physical states. According to Duff (1974, p.165), the nursing student experiences the peak stress period that is associated with late adolescence when she is seeking to define her identity and individuality.

Fox and Diamond (1965, pp.47-48) cite problems of adjustment involving "homesickness, loneliness and general personal pressure which stemmed from the varied aspects of the student's life."

Dye (1974, pp.301-302) also identified as a source of considerable stress the adjustments required of the student to the many demands of the nursing school. Gunther (1969, p.242) notes anxiety, nervousness, depression, and restlessness as symptoms reported by a majority of nursing students, but she questions whether these symptoms are related to the nature of the educational program or the nursing experience. Carter's (1982) study examines the same issue in an attempt to determine whether the distress experienced by nursing students stems from the educational/clinical experience itself, or, whether it issues from the developmental phase to which most nursing students belong.

The relationship between self-actualization scores and the baccalaureate nursing student's response to stress was studied by Sobol (1978) who found that the level of self-actualization is a factor in the student's perception of stressful events. The more self-actualized the student was, the less stress she reported.

The adjustments that a nursing student has to make add to the normal growth and development stresses experienced. This stress is not necessarily detrimental, but some students may exhibit stress signals which call for intervention by faculty members.

Social: Social stresses are those involved in extra-academic and extra-professional activities and in relationships with other nursing students, boyfriends, family members, and friends. Garrett, Manuel, and Vincent (1976, p.12) and Elfert (1976, pp.38-39) discuss the stresses related to residence living. Fox and Diamond (1965, pp.33-34) refer to stressful incidents associated with relationships with other students, which include lack of consideration and problems getting along with roommates.

Boyfriend problems and the management of associated emotional problems are discussed by Duff (1974, p.165) and Garrett et al. (1976, p.12). Fox and Diamond (1965, p.53) report that setting and maintaining standards for dating behaviour is also perceived by students as stressful.

The desire to break away from family ties and to establish individual identity can affect the student's relationships with family members. Fox and Diamond (1965, p.55) report that quarreling and

discord are the most frequently listed stressful incidents in this area. It is not unusual that the nursing student should encounter stress in dealing with social relationships during a time when she is defining her role and learning to fit in socially.

Academic: Encounters with courses, examinations, and workloads will cause high levels of stress if she is unprepared for the academic demands of a school of nursing.

Sobol (1978, p.239) indicates that the prospective nursing student's idea of nursing education is unrealistically shaped by movies, television, and fiction. Fox and Diamond (1965, p.196) state that the student does not anticipate the vast amount of academic work involved in nursing education, and frequently does not perceive the academic component as relevant to caring for patients as a nurse.

Duff (1974), Garrett et al. (1976), Gunther (1969), and Hayes (1966) all indicate that students experience sleeping problems, depression, and restlessness as a reaction to academic work, particularly examinations and evaluations. Elfert (1976, p.39) points out that the student needs to develop confidence in her ability to succeed and that examinations and evaluations are therefore important indicators of her progress towards this goal.

Overall, the literature indicates that the greatest source of stress for the nursing student in the academic area is the evaluation of academic performance. High motivation and fear of failure are understandable; examinations serve not only to test the student's mastery of courses, but also to evaluate her suitability for the profession.

Clinical: Experience directly involved in the delivery of health care to clients is probably the greatest source of stressful experiences for nursing students that is cited in the literature. Williams (1979, pp.4-5) writes that the rising frustration level in students during the clinical program contributes to attrition rates. Adjustments to responsibilities in the clinical area, and the situations and people encountered there, may be frightening to the student who has recently entered young adulthood (Sobol, 1978, p.239).

The nursing student enters the clinical area early in her career. Williams (1979, p.5) states that very few students in any discipline assume such high risk responsibilities so early. Students in Elfert's (1976, p.42) study reported that they experienced stress because of the perceived lack of necessary skills for managing situations in the clinical area. The findings in Sellek's (1982, p.139) study support the notion that the complexity and demands of the clinical environment can be overwhelming. In her research of satisfying and anxiety creating incidents, she found that nursing students reported any new or first encounter with specific clinical situations as being particularly stressful.

Davis and Fricke (1977) write that the many challenges the student receives in the clinical area, such as those involved in difficult patient assignments or complex interpersonal relationships, can precipitate a crisis of anxiety and feelings of helplessness. A major source of stress related to this is experiences with death and dying (Birch, 1979; Dye, 1974, Elfert, 1976, Jones, 1978).

Probably the most stressful experiences that students identify with clinical practice are those related to evaluation of their performance (Davis and Fricke, 1977; Davitz, 1972; Fox and Diamond, 1965; Jones, 1978; Meisenhelder, 1982; Sellek, 1982). In general, the evaluation itself does not cause excessive stress because students want to know how they are performing; but considerable stress develops when they feel unjustly evaluated or criticized.

Other sources of stress in the clinical area involve encounters with discrepancies between what is taught in the classroom and what is practised on the wards (Birch, 1979; Fox, Diamond, Walsh, Knopf, & Hodgin, 1963; Jones, 1978).

Students also report experiencing stress when they have to adjust to new environments, such as that encountered in community work (Coombe, 1976; Elfert, 1976; Fox and Diamond, 1965). The students' lack of experience in contacting clients, arranging appointments, and organizing home visits may lead to avoidance, procrastination and failure to make contacts, and breaking of appointments (Coombe, 1976).

The clinical area presents many stressful experiences for the nursing student. Her ability to cope is dependent on her past experience, her preparation for clinical practice, her personal development, and the type and amount of guidance and support she receives from instructors and from those who work with her in the clinical area.

In summary, the four major sources of stress for nursing students are in the personal, social, academic, and clinical areas of their lives. The common denominator in all of these areas is that the nursing student is usually a young adult, seeking to define her identity at the same time as she is experiencing a vigorous, demanding professional program.

Method

Research problem

The study was designed to identify the main sources of stressful experiences reported by nursing students in the third year of the generic baccalaureate program; to identify the symptoms experienced by these students in response to stress; and to determine whether or not the stressful experiences were perceived

by students as having promoted or hindered learning.

Subjects

The subjects chosen for this study were students enrolled in the third year of the basic baccalaureate program in Nursing at the University of Alberta. Their ages ranged from 20 to 24. All subjects were female because the experience of male students were not considered representative of the majority. The same group of students participated in both the December 1982 and April 1983 data collections. Out of 44 students in the class approached, 33 responded in December, 1982, and 32 in April, 1983.

Data collection and treatment

The instrument used in the study was a critical incident tool based on the ones developed by Davitz (1972); Elfert (1976); Fox and Diamond (1965); Garrett et al. (1975), and MacMaster (1979). The format of directions and the classification system used were based on one suggested by Fox and Diamond (1965).

The participants were asked to identify and write about their most stressful experiences in each of two semesters, September to December, 1982, and January to April, 1983. The anecdotal account was to include the circumstances surrounding the stressful event, the persons involved, and the feelings aroused. At the end of each data sheet the students were asked to indicate whether the stressful experiences promoted, hindered, or had no effect on learning.

None of the raw data were seen by the researchers. A typist transcribed it, deleted specific name references in order to protect anonymity, and destroyed the raw data at completion of the typing.

Findings

Data were analyzed by three independent experts, and by the researchers who judged whether the sources of the stressful events described by the students were academic, clinical, personal, or social. The inter-rater reliability for the first set of data was calculated at 0.78, and the second set of data at 0.72 (see Polit and Hungler, 1978, p.431). The experts and researchers also decided on descriptive subclassifications, the subjects' perceptions of the effect of the experiences on learning, and listed the symptoms described by the subjects. Frequency distributions were tabulated for each group of data.

Analysis of the data showed that students' perceptions of the sources of stressful experiences could be classified in four areas of their lives: Academic, Clinical, Social, and Personal. The Academic and Clinical areas were identified as sources of stress in 78.4% of all incidents reported (Table 1). This finding is in agreement with similar studies.

Subclassifications are described in Table 2. "Workload", a subclassification of the Academic area, is cited as the source of stress in 30 of 88 incidents reported in both semesters, or 34.1% of all stressful experiences described. This finding is in contradiction to other studies which indicate that the Clinical area is the greatest source of stress.

"Clinical Instructor" and "Clinical Evaluation", subclassifications in the Clinical area that were difficult to separate, were perceived as sources of stress in 28.4% of all incidents reported in both semesters. These three sources, "Workload", "Clinical instructor", and "Clinical Evaluation", together account for 62.5% of all reported stressful experiences.

Comparison of the sources of stress for the December and April measurement periods, using the chi-square statistic, applied to the academic, clinical, and combined Social and Personal areas, demonstrated that there was no significant change in the amount of stress reported from these areas (chi-square-1.35, df=2).

Table 1

Distribution of Perceived Sources of Stressful Experiences Among Third Year Baccalaureate Nursing Students at Two Stages in the Academic Year

Sources of Stressful Experiences	December 1982 (n=33) *(ss=48)		April 1983 (n=32) *(ss=40)		Total	
	f	%	f	%	f	%
Academic	17	35.4	19	47.5	36	40.9
Clinical	20	41.7	13	32.5	33	37.5
Social	5	10.4	2	5.0	7	8.0
Personal	6	12.5	6	15.0	12	13.6

*ss = total sources of stress
Some students perceived more than one source of stress as having equal impact

Table 2

Subclassifications of Perceived Sources of Stressful Experiences Among Third Year Baccalaureate Nursing Students in Descending Order of Total Frequency and at Two Stages in the Academic Year

Subclassification	December 1982 (n=33) *(ss=48)	April 1983 (n=32) *(ss=40)	Total f	Total %	Main Classification
Workload	15	15	30	34.1	Academic
Clinical instructor	9	4	13	14.8	Clinical
Clinical Evaluation	6	6	12	13.6	Clinical
Clinical Care	5	1	6	6.8	Clinical
Life Experiences	3	2	5	5.7	Personal
Relationships/friends	4	0	4	4.5	Social
Health/personal	1	2	3	3.4	Personal
Marks	1	2	3	3.4	Academic
Relationships/family	1	1	2	2.3	Social
Future goals	1	1	2	2.3	Personal
Testing values	1	0	1	1.1	Personal
Interaction with professor/class	1	0	1	1.1	Academic
Personal problems	0	1	1	1.1	Personal
Fear of failure	0	1	1	1.1	Academic
Living arrangements	0	1	1	1.1	Social
Interaction with clinical staff	0	1	1	1.1	Clinical
Interaction with patients	0	1	1	1.1	Clinical
Preparation for exams	0	1	1	1.1	Academic

* ss = total sources of stress
(Some students perceived more than one source of stress as having equal impact.)

The December and April data on the subclassifications were combined into six workable groups: 1) Workload, 2) Clinical Instructor and Clinical Evaluation, 3) Clinical Care, Interaction with Patients, and Interaction with Clinical Staff, 4) Life Experiences, Future Goals, Testing Values, Personal Problems, and Health, 5) Relationships with Family, Friends, and Living Arrangements, and 6) Marks, Interactions with Professor/Class, Fear of Failure and, Preparation for Exams. Comparisons indicate that there is no significant change or difference in the results obtained from this class at the two periods of study (chi-square-2.64, df=5).

Although the participants were asked to document the most stressful experiences that they had had in the previous semester, several students documented more than one event and several events contained more than one source of stress. All data were used in this analysis and all sources of stress were tabulated. During the analysis of the data it was also found that six students indicated that they could not pinpoint one most stressful event but experienced a "build-up" of stresses. This is consistent with Lazarus' (1976, p.71) definition of stress and is not an unusual finding in this study.

In 66.2% of the anecdotes recorded, the stress was perceived as hindering learning. Symptoms described by the students as a xresponse to stressful experiences were similar to those identified in the literature. Students used words such as "worry", "pressure" or "anxiety" in their description of their subjective states. Other descriptions included more specific feelings such as anger and frustration; physical complaints such as illness and sleeplessness; and a variety of behaviours indicative of loss of emotional control such as yelling and crying. Tabulations of the frequencies with which various symptoms/feelings were reported are available from the authors and are not included here. It was felt that these frequencies do not add significantly to the discussion.

Discussion and Implications

High levels of stress interfere with the learning process. With increasingly complex technology, high acuity of patients in hospitals, and the knowledge explosion, the student is faced with multiple stressors at a time in her life -- early adulthood -- when the developmental challenges are intense.

The areas identified by the students as being the greatest sources of stress, i.e. Academic and Clinical, are under the control of educators. When one considers that "Workload", "Clinical Instructor", and "Clinical Evaluation" are intended to facilitate learning, it is ironic that in most of the anecdotes related, the students perceived them as having an opposite effect. Consideration should be given to the numbers and timing of assignments, papers, and examinations, to ensure that students are not overloaded. Efforts could be made to stagger deadlines,

combine assignments, and evaluate each assignment for its academic value in relation to the amount of effort required. Consultation among faculty members in different courses is a valuable way to determine what workload is being assigned.

The designation of members of faculty as academic advisors to assist students in planning and evaluating their workloads, and to help them in time management, study, and library research skills is an excellent strategy.

It seems that the relationship between clinical instructor and students is one which has a high potential for stress. Inasmuch as the clinical instructor is a significant and powerful figure in the student's perception, the instructor is also in an excellent position to provide support and encouragement to students.

It is important that the clinical instructor be sensitive to the needs of students. This facilitates learning and the development of sensitivity and compassion towards others, including patients. Clinical instructors should be clinical experts who have the respect of clinical staff and students. The style of clinical supervision should be characterized by ongoing, descriptive feedback, particularly of a positive nature. The need for such clinical supervision was mentioned by some students in this study and is confirmed in a study conducted by Mogan and Knox (1983, p.11), entitled "Students' Perceptions of Clinical teaching". Although negative criticism is frequently necessary, it should be delivered in terms which preserve the student's self-esteem and dignity. In Meisenhelder's (1982) discussion of the problems inherent in clinical evaluation, she emphasizes these points and offers additional strategies that can be utilized by the nursing instructor in her effort to create an optimal learning experience for the students.

Faculty members may also need to consider the institution of specific remedial measures for students who experience unusually stressful events. Such remedial measures may include student counselling, desensitization therapy, or stress management seminars. Strauss and Hutton (1983) propose a framework that can be utilized by clinical instructors to increase their awareness and sensitivity to the stress experienced by students in clinical learning. Their model, called the "Transactional Model" of stress, considers the individual's perceptual and cognitive processes, and the ability to cope, as playing a crucial role in the interpretation of events as being stressful and therefore their responses to such events. This model appears to be the first of its kind to address the issue of how to analyze a clinical situation from the student's perspective. Such a framework, together with information obtained regarding sources of stress in students, provides the clinical instructor with valuable guidelines for intervention.

The information gained from this study will be used to develop a questionnaire to determine sources and level of intensity of stress in nursing students enrolled in all four years of the generic

baccalaureate program. The researchers would then be able to make comparisons between the different years and present such information to the faculty members. Such information would enable the faculty to evaluate teaching strategies and make adjustments in order that the students may benefit from experiences that promote rather than hinder learning.

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RÉSUMÉ

Sources de stresse chez les étudiants de troisième année du baccalauréat en sciences infirmières

La présente étude a permis d'identifier les sources d'expériences stressantes chez des étudiants de troisième année inscrits au programme de baccalauréat en sciences infirmières à l'Université d'Alberta. Les chercheurs ont rencontré les étudiants au mois de décembre et au mois d'avril de l'année universitaire et leur ont demandé de rédiger un petit compte rendu de l'expérience la plus stressante qu'ils avaient vécue au cours du semestre précédent.

Dans 78,4 pour cent des cas, on a pu situer les sources de stress mentionnées par les étudiants dans le contexte universitaire et clinique. La charge de travail, une subdivision du secteur universitaire, comptait pour 34,1 pour cent de toutes les sources de stress identifiées; c'était également la source reconnue le plus souvent lors du sondage de décembre et d'avril auprès des étudiants.

D'autres sources de stress identifiées dans les comptes rendus des étudiants ont été liées aux aspects sociaux et personnels de leur vie; ces sources Étaient moins frÉquentes. Dans 66,2 pour cent des récits anecdotiques, les étudiants indiquaient que le stress gênait leur apprentissage.

Une étude de ce genre sur le stress fournit aux éducateurs des renseignements précieux concernant leurs étudiants. Ils peuvent se servir de ces données pour mettre au point des programmes de formation qui favorisent l'apprentissage et maîtrisent les facteurs susceptibles de causer une anxiété et un stress accrus pour les étudiants.

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Applications are invited for the position of Director of the School of Nursing, University of Ottawa, effective July 1,1986.

The School of Nursing was established in 1933 within the context of a bilingual university and consists of 375 full-time and 109 part-time undergraduate students as well as 32 full-time and 16 part-time faculty members. It has a strong commitment to education, research and clinical practice. It offers a four-year basic and a three-year post RN program, both leading to a Bachelor of Nursing Science degree. It supports an innovative thrust in continuing education, including tele-education.

The School of Nursing is one of the three components of the Faculty of Health Sciences. The Director of the School of Nursing is an Associate Dean of the Faculty of Health Sciences. The School is located in a university Health Sciences Center, and enjoys a long-standing association with the University Teaching Hospitals and other community health agencies.

As the senior administrative officer of the School, the Director will be expected to provide dynamic leadership in the future development of the School, encourage scholarly research, innovative teaching, as well as promoting creative professional associations with the broader community. The successful candidate must have a remarkable record and substantial experience in teaching, scholarship, and academic administration. The successful candidate must be a professional nurse, eligible for registration in the Province of Ontario. Preference will be given to candidates with an earned doctoral degree and proficiency in Canada's two official languages.

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Gilles D. Hurteau, M.D., Dean,
Faculty of Health Sciences,
University of Ottawa,
451 Smyth Road,
Ottawa, Ontario, K1H 8M5

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Prof. Una Ridley,
Dean, College of Nursing,
University of Saskatchewan,
Saskatoon, SK, S7N 0W0

CALL FOR ABSTRACTS

The Council on Nursing and Anthropology is sponsoring a symposium entitled the "Anthropology of Health" for the Annual Meetings of the American Anthropological Association in Philadelphia, PA, December 3-7, 1986. Individuals interested in presenting papers should submit abstracts and registration fees by March 1, 1986 to:

Evelyn Barbee, R.N., Ph.D.
University of Michigan
School of Nursing
400 N. Ingalls Bldg.
Ann Arbor, MI 48109

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Please submit three double-spaced copies of the manuscript on 216mm × 279mm paper, using generous margins. Include a covering letter giving the name, address, present affiliation of the author(s). It is understood that articles submitted for consideration have not been simultaneously submitted to any other publication. Please include with your article a statement of ownership and assignment of copyright in the form as follows: "I hereby declare that I am the sole proprietor of all rights to my original article entitled ' ' and that I assign all rights to copyright to the School of Nursing, McGill University, for publication in *Nursing Papers/Perspectives en nursing*. Date __ Signature_____."

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External validity — relevance, accountability: Is the question worth asking? Is the problem of concern? Are there problems of confidentiality or ethics? Are the findings of the research or the conclusions of the essay significant? Can the findings or the conclusions be applied in other situations? Does the article contribute to knowledge in nursing? In what way?

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La revue *Nursing Papers/Perspectives en nursing* accueille avec plaisir des articles de recherche ayant trait aux sciences infirmières et aux soins de la santé. Veuillez adresser vos manuscrits à la rédactrice en chef, *Nursing Papers/Perspectives en nursing*, Ecole des sciences infirmières, Université McGill, 3506 rue University, Montréal, P.Q., H3A 2A7.

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