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# NURSING PAPERS PERSPECTIVES EN NURSING

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## EDITORIAL

Have you ever stopped to contemplate the relationships among authors, reviewers, and editors? Recently, while corresponding with contributors in my role as editor, I have noted just how delicate these relationships are. We all have inherent assumptions about the other, preconceived notions of our different attitudes. We even attribute a host of unsavory characteristics and motivations to each other.

Let us begin from an author's perspective. After long periods of thinking, researching, and toiling over the writing of a manuscript, an author must submit his or her creation to the disorganized, dingy office of an editor. Imagine how vulnerable one feels – the overpowering protectiveness of one's work and the overwhelming fear of its mutilation or ultimate rejection. Weeks and often months of waiting in anguish pass before the fate of the manuscript is known.

In an ideal world, reviewing a manuscript should be a learning experience for the author and the reviewers. Reviewers would donate their valuable time to a thorough analytic review, make positive constructive comments, and write all of this in a polite supportive manner (so that the editor would not have to reword the critique before sending it on to the author). In this ideal world, the manuscript would represent good science, be well written, and would also be accepted. The author, reviewer, and editor would all be very pleased with each other. In the majority of cases, a variety of less desirable outcomes take place.

Reviewers receive a manuscript on top of an already demanding schedule. Their immediate reaction is often one of anger with the editor who they suspect is either sending them manuscripts not directly related to their areas of expertise or is overburdening them, maybe even testing their abilities to review. The manuscript may or may not be interesting, well written, and significant. The review of the manuscript may or may not be constructive, helpful, encouraging, and reasonably polite. The editor may or may not think that the manuscript is publishable, or that the review is reasonable. The editor's final decision has to be justified to both the author and the reviewer, who at times stand at opposite ends of a continuum.

For an editor, this dichotomy is the worst scenario; the manuscript is rejected, the reviewers' comments are caustic, the editor suggests major revisions and submission to another journal, or, even worse, suggests nothing. The author receiving this notice is likely, in a blind rage, to write a letter telling the editor just what he or she thinks of the journal, the editor,

and the reviewers. Frequent adjectives and adjectival phrases include such things as: naive, ignorant, stupid, narrow-minded, obviously knows nothing about the field, and so on. By all means, write the letter, but, do not mail it.

Editors and reviewers are also human. They may suffer their own scientific neurotic quirks such as preferred or favoured statistical approaches, format, terminology, etc. They also, however, have standards and policies. Manuscripts that are well written, with good format and presentation, and that relate to the general mission of the journal elicit a more positive response from the editors and reviewers. If reviewers begin their work with a positive impression, the review is likely to be more constructive. Authors take heed. Read through the comments again, there is bound to be some grain of truth and something helpful in them.

The obvious fact of the matter is that not all manuscripts are accepted (about 35-49% are rejected), and that not all reviews are helpful. Most manuscripts are accepted after some degree of revision. In the end, no matter what we may think of each other, it is the reader who will make the final judgement about all of us.

Mary Ellen Jeans



## ÉDITORIAL

Vous êtes-vous déjà arrêtées pour réfléchir aux relations qui existent entre l'auteur, le comité de lecture, et la rédactrice en chef? C'est ce que j'ai fait dernièrement alors que je correspondais avec plusieurs de ces personnes, et j'ai remarqué à quel point ces relations sont délicates. Nous avons toutes des idées préconçues sur l'autre, et sur nos différentes façons de voir les choses; nous attribuons même une kyrielle de particularités et de motivations malveillantes à l'une et à l'autre.

Commençons par le point de vue de l'auteure. Après de longues périodes de réflexion, de recherche et de travail acharné pour écrire le manuscrit, l'auteure doit soumettre sa création, tôt ou tard, aux bureaux désorganisés et mal éclairés de la rédactrice en chef. Imaginez la vulnérabilité que l'on peut sentir – un grand besoin de protéger son chef-oeuvre et une crainte profonde de le voir mutilé ou rejeté. De longues semaines, voire même des mois, d'attente cruelle doivent passer avant de connaître le destin de son manuscrit.

Dans un monde parfait, la lecture d'un manuscrit serait une expérience didactique pour l'auteure et pour le comité de lecture. Les lectrices feraient un don généreux de leur temps pour étudier le texte à fond, elles écriraient des commentaires positifs et constructifs, dans un style poli et encourageant, évitant ainsi à la rédactrice en chef la nécessité de récrire la critique avant de l'envoyer à l'auteure. Dans ce monde parfait, le manuscrit serait bien écrit, présenterait un bon rapport scientifique et serait accepté pour publication. L'auteure, la lectrice, et la rédactrice en chef seraient bien contentes l'une de l'autre. Malheureusement, dans la majorité des cas, les résultats sont différents et moins agréables.

La lectrice reçoit un manuscrit qui s'ajoute à une charge de travail déjà très lourde. Sa première réaction en est souvent une de colère envers la rédactrice en chef qu'elle soupçonne de lui envoyer un texte qui n'est pas directement relié à son domaine d'expertise, de la surcharger, ou peut-être même de tester ses capacités de faire la critique d'un manuscrit. Le manuscrit sera ou ne sera pas intéressant, bien écrit, et instructif. La critique du manuscrit sera ou ne sera pas constructive, utile, encourageante, et passablement polie. La rédactrice en chef trouvera que le manuscrit est publiable ou ne l'est pas, que la critique est raisonnable ou ne l'est pas. La rédactrice en chef doit justifier sa décision finale à l'auteure et à la lectrice qui se situent souvent à deux pôles opposés.

Imagions le pire scénario, le manuscrit est rejeté, les commentaires des lectrices sont mordants, la rédactrice en chef suggère des revisions majeures et la soumission à un autre journal, ou, pire encore, ne suggère rien. Il est

probable que l'auteure, furieuse de recevoir cet avis, écrira une lettre à la rédactrice en chef pour lui communiquer sa façon de penser sur le journal, la rédactrice en chef et les lectrices. On y trouvera des épithètes, telles que naïf, ignorant, stupide, étroit d'esprit, qu'il est clair qu'on ne connaît rien du domaine, et ainsi de suite. Allez-y, écrivez la lettre, mais ne la mettez pas à la poste.

La rédactrice en chef et les lectrices sont aussi des personnes humaines. Elles peuvent posséder leurs propres bizarreries névrosées en matière d'écrits scientifiques, telles une préférence pour une certaine approche statistique, ou une terminologie et un format bien particuliers. Par contre, elles ont aussi des normes et des politiques à respecter. Les manuscrits qui sont bien écrits, bien présentés, et qui s'apparentent aux buts visés par le journal suscitent une réaction plus positive de la part de la rédactrice en chef et des lectrices que les textes mal écrits ou mal présentés. Si les lectrices entreprennent leur travail sous l'effet d'une première impression positive, il y a plus de chance que la critique soit constructive. Auteures, prenez note. Relisez les commentaires, vous y trouverez probablement un grain de vérité et quelque chose d'utile.

Le fait est que tous les manuscrits ne sont pas acceptés (environ 35-40% sont rejetés), et toutes les critiques ne sont pas utiles. La plupart le sont et la plupart des manuscrits sont acceptés après des révisions plus ou moins grandes. En fin de compte, qu'importe ce que nous pouvons penser l'une de l'autre, c'est la lectrice du journal qui rendra le jugement final sur nos toutes.

Mary Ellen Jeans



# THE RELATIONSHIP OF SHIFT WORK TO NURSES' SATISFACTION AND PERCEIVED WORK PERFORMANCE

Brian J. Harvey . T. Edward Hannah

Shift work is an important issue in the nursing profession because it is difficult for most nurses to avoid it in some form or another (Mott, Mann, McLoughlin & Warwick, 1965; Rose, 1984). Being a working nurse, in most circumstances, implies working some form of shift schedule. Not only does shift work affect an individual's health, social life and performance (Aschoff, 1980; Colligan, 1983; Colquhoun & Rutenfranz, 1980; Felton, 1975), it also affects job satisfaction, fitness and life satisfaction in general (McGrath, Kelly & Machatka, 1984). The deleterious effects of shift work have generally been attributed to desynchronization of the work-sleep cycle (Felton, 1975). This, in turn, may lead to disruption of the various metabolic functions which follow a circadian pattern (Tom, 1976; Walker, 1978). Thus, while shift work is essential for patient care, it can obviously result in negative effects on the nurses themselves. It is important, therefore, that researchers concern themselves with the effects of shift work and, in particular, with predicting individual responses to shift work.

With regard to the question of individual differences in adjustment to shift work, research by Folkard, Monk and Lobban (1979) found that morning types (M types: people who feel more alert and "alive" during the morning) have a more difficult time adjusting to shift work than evening types (E types: people who prefer sleeping later in the morning and staying up later in the evenings). Folkard et al. (1979) developed a scale which when factor analysed produced three factors: sleep rigidity (flexibility of sleep habits), vigorousness (ability to overcome drowsiness and fatigue) and morningness. However, Courtwright and Frankenfeld (1984), in two administrations of this scale failed to replicate the factor structure originally obtained by Folkard et al. In fact, the factors extracted from the first administration by Courtwright and Frankenfeld did not compare to those extracted from the second administration. They concluded, therefore, that the Folkard et al. scale did not have predictive validity, at least in their case.

Brian J. Harvey B.Sc. is a nurse in the Armed Forces. Dr. T. Edward Hannah is a member of the Department of Psychology and the Division of Community Medicine, Faculty of Medicine, at Memorial University of Newfoundland.

Akerstedt and Gillberg (1981) have also produced a six-factor scale which purports to measure quality of sleep, difficulty of falling asleep, premature awakening, environmental disturbances, restorative value of sleep and mood. Scores on these subscales should, theoretically, bear a relationship to satisfaction and perceived job performance of shift workers. However, to date there has been no reported replication of the factor structure of the Akerstedt and Gillberg scale. The purpose of the present study, therefore, was to determine for a group of working nurses and nurse interns a) whether or not the factor structures of the Folkard et al. and Akerstedt and Gillberg scales could be replicated, and b) whether measures of job satisfaction with and perceived performance on the day and night shifts under a rapidly rotating shift system bear any relationship to scores on these scales.

## Method

### *Subjects*

The study sample consisted of all nonsupervisory registered nurses and nurse interns working the "rapidly rotating two-shift system" on either a medical or surgical floor of a large urban hospital in St. John's, Newfoundland. Of 63 people who consented to participate in the study, 50 actually returned their questionnaires, for a return rate of 80%. All respondents were female (no males employed), 62% were single, and 69% were RNs. The mean number of years worked was 3.8 (Standard deviation [s.d.] = 5.1) and the average age was 25.6 years (s.d. = 6.1).

### *Materials*

The questionnaire consisted of the following: six items related to demographic characteristics (age, sex, work experience, marital status) and respondents' perceptions of the level of performance on and satisfaction with days, nights, and eight-hour shifts; 19 items from the Folkard et al. (1979) scale that were related to their constructs of sleep flexibility, morningness, and drowsiness; and ten items from the Akerstedt and Gillberg (1981) scale that were related to quality of sleep, difficulty falling asleep, premature awakening, environmental disturbances, restorative value of sleep, and mood. The questionnaire was divided into three sections corresponding to the demographic information plus the two scales. Because neither the Folkard et al. nor the Akerstedt & Gillberg scales are copyrighted and both are published in the public domain, and because their use was for research purposes only, permission from the authors to use their scales was deemed unnecessary, a generally accepted practice.



## *Procedure*

Potential subjects for the study were approached by an inside contact (the spouse of the senior author, a registered nurse) rather than by the researchers themselves as a precaution against consent bias (Polit & Hungler, 1983). Informed consent, a requirement of the Health Sciences ethics committee, was obtained from all potential respondents; they were also assured of complete confidentiality. Those who agreed to participate were then contacted at the beginning of their next night shift and provided with a copy of the questionnaire to be completed during the shift. The night shift, typically, is not as task oriented or hectic as the day shift and therefore research participants have more time available for completion of questionnaires, etc. (Mott et al., 1965). A pilot study carried out with six nurses working the day shift had shown that, by the end of their shift, none of the six were able to complete the questionnaire. In addition, because of the chronic understaffing at this hospital during the day shifts, having respondents complete the questionnaire during the day, even if they could have found the time to do it, may have introduced more biases into the results than relying only on nurses working the night shift. For this reason, it was not possible to analyse responses separately for those completing the questionnaire who worked days and those who worked nights. Finally, because respondents were free to complete the questionnaire at any point during their shifts, they probably did so when they most felt like it (i.e., when they were most mentally alert). Thus they probably completed the questionnaire earlier rather than later in their shifts and any problems arising from fatigue were probably minimal.

## **Results**

### *Factor analyses*

Both sets of scales were factor analysed using principal components analysis and varimax rotation. Factor analysis is a statistical procedure used to determine, for a questionnaire such as the one employed in the present study, how many independent "subscales" or "factors" there are. While in theory there are as many factors as there are items, extracting this many factors would be pointless. Thus the procedure identifies those items that are highly intercorrelated as the principal components. The varimax rotation procedure assures that the sets of factors identified are as independent of one another as possible (i.e., orthogonal). This then means that scores computed for one subscale or factor are as uncontaminated by scores on other factors as is statistically possible.

While the factor analyses of the two scales were successful in one sense (in that they produced a factor structure for each scale), they were unsuccessful at reproducing the original factor structures reported by Folkard et al. (1970) and by Akerstedt and Gillberg (1981). Therefore no further analyses were attempted with the separate scales. Instead, the questions from the two scales were combined into one set and factor-analysed. This procedure turned out to be very satisfactory. After eliminating seven questions with low or near zero item-total correlations ( $r$ 's  $< .15$ ), the principal components analysis, followed by varimax rotation, yielded seven factors with Eigenvalues greater than 1.0 and accounted for 71.3% of the variance. These are shown in Table 1. As can be seen, each question clearly loaded on only one factor and the factor loadings ranged from .41 to .87. The factors were labelled (from one to seven respectively) Sleep Difficulty, Control Over Sleep, Restorative Value of Sleep, Drowsiness, Effects of Sleep Loss, Regularity, and Rigidity.

### *Analysis of variance*

A score was computed for each subject, on each of the seven factors that were derived from the factor analysis, by summing their responses across all items composing a given factor. The subjects were then divided into three groups on the basis of the shift identified as resulting in their worse performance (e.g., day, night or no difference), and their scores on each of the factor subscales analysed using a one-way anova. Only one factor proved to be significantly related to perceived performance. That was the Sleep Difficulty factor. Those who reported that they performed less well on day shifts had the lowest scores on the Sleep Difficulties factor ( $\bar{X} = 4.8$ , s.d. = 4.9), those reporting nights as lower performance shifts had the highest scores ( $\bar{X} = 8.0$ , s.d. = 2.5), while those reporting no difference between days and nights had intermediate scores ( $\bar{X} = 5.8$ , s.d. = 3.1). The analysis of variance was statistically reliable:  $F(2,46) = 3.38$ ,  $p < .05$ .

Scores on the seven-factor analytically derived subscales were also analysed by perceived shift satisfaction. Three factors distinguished between day, night, and no difference groups. These were the Sleep Difficulty, Control Over Sleep and Drowsiness factors. Subjects reporting the least satisfaction with the day shift had the lowest scores on the Sleep Difficulty subscale ( $\bar{X} = 4.9$ , s.d. = 4.8), while those reporting dissatisfaction with the night shift had the highest scores ( $\bar{X} = 7.4$ , s.d. = 2.5). Those reporting no difference between days and nights were intermediate ( $\bar{X} = 5.2$ , s.d. = 2.4). The differences were statistically reliable:  $F(3,45) = 2.95$ ,  $p < .05$ .

With regard to Control Over Sleep, those most dissatisfied with working days scored highest ( $\bar{X} = 5.8$ , s.d. = 1.6), those most dissatisfied with

Table 1

*Factor Item Loadings for Combined Scales*

		Factors		
Item and Source*		1 Sleep Difficulties	2 Control Over Sleep	
A 3.	Difficulty falling asleep at night	.69		
A 5.	Premature awakening during day sleep	.81		
A 7.	Environmental disturbances during day sleep	.68		
F 2.	"Sleep in" late	.62		
F13.	Overcome drowsiness		.79	
F17.	Ease of waking up		.82	
F19.	Wake up before alarm		.57	
		3 Restorative Value of Sleep	4 Drowsiness	5 Effects of Sleep Loss
A 9.	Restorative value of day sleep	.75		
F 1.	Ease of taking "cat naps"	.70		
F 5.	Ease of sleep during day	.72		
A10.	Restorative value of night sleep		.66	
F 4.	Phases when difficult to get to sleep		.48	
F 9.	Drowsy during day		.68	
F12.	"Wake up" properly		.62	
A11.	Mood change (irritated) during night work			.74
F15.	Reaction working odd hours			.47
F16.	Feel livelier during day			.78
		6 Regularity	7 Rigidity of Sleep	
A 8.	Environmental disturbances during night	.57		
F 6.	Regularity of bed-time	.64		
F11.	Miss a night's sleep	.75		
A 4.	Difficult falling asleep at night		.87	
A 6.	Premature awakening during night sleep		.66	

\*"A" denotes questions from Akerstedt and Gillberg (1981).

\*\*"F" denotes questions from Folkard et al. (1979).



working nights scored lowest ( $\bar{X} = 4.6$ , s.d. = 1.8), and those indicating no difference were intermediate (5.3, s.d. = 1.2),  $F(3,45) = 3.39$ ,  $p < .05$ ).

Finally, on the Drowsiness factor, those most dissatisfied with working nights scored highest ( $\bar{X} = 6.2$ , s.d. = 1.8) while those most dissatisfied with working days and those indicating no difference scored about the same ( $\bar{X} = 4.7$  and 4.6, s.d. = 1.9 and 1.2, respectively). The analysis of variance was reliable:  $F(3,44) = 3.32$ ,  $p < .05$ .

## Discussion

The results of the present study are partially consistent with past research. First of all, the factor analysis of the separate Folkard et al. (1979) scale and the Akerstedt and Gillberg (1981) scale failed to confirm earlier analyses. The present findings with regard to the factor structure of the Folkard et al. scale are consistent with the earlier findings of Courtright and Frankenfeld (1984). In two administrations of the Folkard et al. scale, they also were unable to replicate the factor structure originally obtained by Folkard et al. (1979). The nonreplication of the factor structure of the Akerstedt and Gillberg scale also raises questions about the original findings. This, however, does not mean that the scales are not useful. Factor analysis of the complete set of questions from both scales produced a factor structure that may be both meaningful and useful. Moreover, three of the factor subscales were related to nurses' perceptions about which shift they performed most inadequately on and which shift they were least satisfied with.

Nurses who perceived their worse performance as occurring on the night shift reported more sleep difficulties than those reporting no difference between days and nights or those whose worse performance was reported as occurring on the day shift. This finding concurs with earlier research (Foret, Bensimon, Benoit & Vieux, 1981; Hepburn, Ortiz & Locksley, 1984; Mecacci & Zani, 1983).

The present study also examined perceived satisfaction with the different shifts. It was found that three factor subscales distinguished between those reporting most dissatisfaction with night shift and those reporting most dissatisfaction with day shifts or those reporting no difference. Those reporting least satisfaction with the night shift were also those reporting the most sleep difficulties, the least control over sleep and the greatest problems with drowsiness and related problems. Conversely, those reporting least satisfaction with the day shift, had fewer sleep difficulties, more control, and fewer complaints about drowsiness than those dissatisfied with the night shift. It appears that those nurses dissatisfied with working days were not dissatisfied because of sleep problems, but perhaps because of other problems not assessed in the present research. These could be such things as

disruption of family, social and recreational life (Harrington, 1978) or perhaps more general dissatisfactions with the nursing profession. Obviously more research should be done to determine whether or not this pattern persists and what the basis of it is.

The present findings call into question the need for instruments that purport to assess "morning" types and "evening" types, at least among nurses working day and night shifts on a rapidly rotating basis. While our sample was admittedly on the small side and nonrandom (although it was the total population of nurses on the two floors), we could find no evidence of the existence of these two types of individuals among our nursing sample, let alone any evidence that satisfaction and performance with or on certain shifts was related to this typology. We can suggest, and somewhat more parsimoniously, that dissatisfaction among nurses with the night shift and the perception that one's performance is less than optimum on this shift are primarily a function of sleep difficulties and sleep-related problems such as drowsiness and feelings of lack of control over sleep.

The present findings have implications for nursing administration. Cohen (1981) suggested that circadian rhythms must be considered when shift systems are devised and that nurses' circadian rhythms may affect the quality of patients' health care. Our subjects would apparently agree. Furthermore, Harrington (1978) argued that in order to increase the popularity of the night shift, only volunteers ought to be employed on this shift. This might be feasible if proper incentives could be provided. However, given the general dissatisfaction with the night shift, at least among our nurses, these incentives would have to be quite significant in order to be effective. However, given that night shifts are essential and that significant incentives, perhaps in terms of shift differentials may not be possible, other ways of reducing the effects of night work on job performance and satisfaction may be possible. For example, Bennett, Smith and Wedderburn (1982) found that counselling makes shift work easier to cope with. Minors, Waterhouse and Folkard (1983) argue that a major way of dealing with the disturbances of night work is for the individual to build a structured lifestyle around that shift, with regular eating, sleeping and leisure times built in. Walker (1978) also recommends that only a single night shift, with at least 24 hours of free time between each such shift, be assigned any given individual. Though this is not always possible, the "rapidly rotating shift system" comes close to satisfying Walker's criterion. Finally, because we know that a sense of control is important in coping with environmental stressors (Baum & Singer, 1980), it might be worthwhile introducing some form of individual control by allowing a certain degree of choice in shift scheduling.

In summary, the results of the present research reinforce the notion that the night shift, among nurses, is seen as detrimental to both job

satisfaction and job performance. Specifically, sleep difficulties, drowsiness, and control over sleep appear to be the factors that lead to satisfaction and performance decrements. There was no evidence that the "morning" and "evening" typology is a useful construct when examining the relationship of perceptions of work performance and of satisfaction to a "rapidly rotating shift system".

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## RÉSUMÉ

### Lien entre le travail par postes, et la satisfaction au travail infirmier et le rendement perçu chez le personnel

La présente étude a été conçue de manière à reproduire, à l'aide d'un échantillon d'infirmières, la structure par facteurs de deux questionnaires précédemment utilisés et qui portaient sur le travail par postes (Akerstedt & Gillberg, 1981; Folkard, Monk, & Lobban, 1979); l'étude vise également à mettre en rapport les résultats de ces échelles et la satisfaction au travail ainsi que le rendement perçu. L'échantillon était composé de cinquante infirmières diplômées et infirmières stagiaires travaillant dans un grand hôpital général, selon un horaire à deux postes et à roulement rapide.

Bien que des analyses factorielles distinctes n'aient pas permis de reproduire les résultats obtenus antérieurement, une analyse factorielle des échelles combinées a permis de dégager un ensemble utile de facteurs. Parmi les facteurs isolés, la difficulté à dormir a montré le lien le plus clair avec la satisfaction et le rendement. Deux autres facteurs, la somnolence, ainsi que la lutte contre le sommeil étaient également associés à la satisfaction. On en a conclu que les infirmières travaillant selon un horaire par postes à roulement rapide fondent l'évaluation qu'elles font de leur rendement et de leur degré de satisfaction sur les problèmes liés au sommeil (p.ex. difficulté à s'endormir ou à préserver son sommeil, et lutte contre la somnolence et la fatigue). Rien n'indique que la typologie "matin" et "soir" soit utile lorsqu'on examine le lien entre les perceptions du rendement et la satisfaction au travail, et le système par postes à roulement rapide.

# TEACHING STYLES: IS THE MODULAR METHOD MORE EFFECTIVE?

Susan Laschinger . Sharon Ogden Burke . Mary Jerrett

At a time when nurse educators in academic and service settings are interested in fostering independent study, a number of teaching methods have been tried – among them, modular instruction. While believed to be valuable, the effectiveness of these new methods is seldom evaluated. The purpose of this study was to determine whether knowledge, level of perceived achievement, and use of and attitude toward the subject matter were greater with instruction based on modules or based on lectures.

## Review of the Literature

A learning module is an instructional package that deals with a single conceptual unit of the content, and it contains the materials necessary for relatively independent learning (Bevis, 1973). In nursing education, modular learning has been implemented in a variety of universities and colleges. Modules provide opportunities for students to be responsible for their own learning; students are able to pace themselves within a framework set up by the instructor, and they become active participants instead of passive learners (Russell, 1974). Huckabay (1981) states that exposing students to independent learning, such as modular content, is essential in developing their abilities and desire to continue their education.

Furthermore, it is expected that the modular form of instruction will enable students to learn the subject matter more effectively, and that the students will have a more positive feeling of achievement and mastery than if the lecture/demonstration method alone is used (Huckabay, 1981). These ideas are premised on Bloom's (1971) theory of mastery learning, and Gagne's (1962) theory of the acquisition of knowledge.

However, the research findings on the effectiveness of modules are mixed, and the study designs limit the extent to which results can be generalized. With notable exceptions, there have been few studies that have looked at

Susan Laschinger, R.N., M.Sc.(A), is Assistant Professor, Sharon Ogden Burke, R.N., Ph.D., and Mary Jerrett, R.N., M.S. are Associate Professors, School of Nursing, Queen's University, Kingston, ON.
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modular learning in nursing education. Of these, Furnell and Thompson (1976) examined independent study modules that were used in the third year of a baccalaureate program. They found that a large proportion of students completed the modules and generally expressed satisfaction with them. There was no difference found in relation to the length of time the modules were studied and term paper marks or examination scores. Similarly, Arnold (1978) studied three types of teaching strategies – programmed instruction, lecture/demonstration, and student choice – with 160 freshmen associate degree nursing students. Post-tests only were used to measure achievement, and there were no measurable differences between the mean scores of the three teaching strategy groups.

Blatchley, Herzog, and Russell (1978) developed and evaluated self-study modules in a medical-surgical nursing course for second-year associate degree students. Their results indicated that self-study proved to be as effective as the traditional lecture/demonstration, and most students enjoyed the former approach.

In 1981 Huckabay compared the effects of modularized instruction and traditional teaching techniques on cognitive learning and on the affective behaviours of graduate nursing students. The experimental design involved three groups of subjects, all of whom were pre- and post-tested. It was found that a teaching strategy that combines independent learning modules with lecture/demonstration generally produces more positive results than a strategy that concentrates exclusively either on a module or on the traditional lecture method.

## The Study

### *The module design*

The study of pain is a rapidly expanding area of nursing knowledge and experience. In order to be successful in providing comfort and relief from pain, a nurse must be familiar with pain theory and base actions on an understanding of the conceptual elements of pain. This was identified as a major concept that needed further development in our baccalaureate program. Thus, in consideration of the reports that this was an ideal teaching and learning approach, a module was developed for use in the third year of our program.

The module developed by Jerrett and Laschinger had three units: the concept of pain, assessment of children and adults in pain, and intervention with children and adults in pain. Each unit included objectives, readings, videotapes and/or audiotapes, exercises, and clinical experiences. The

theoretical framework for the pain content was primarily derived from Melzack and Wall (1982). Pre-tests and post-tests were also included as part of the module design. However, before adoption of this teaching approach, it was important to know whether it was better than the lecture/demonstration method we were then using.

### *Study questions*

We sought to answer the following questions in our study.

Would students exposed to the modular method of instruction in addition to lecture/demonstration, as opposed to students receiving only the lecture/demonstration instruction:

- (1) Have greater increases in knowledge regarding pain?
- (2) Have greater changes in attitudes toward persons in pain?
- (3) Be more likely to consider pain in their application of the nursing process?
- (4) Be more favourable toward learning by module over time?

### *Instructional methods*

This study had two phases, the first employed a two group pre-test, post-test, quasi-experimental design. The independent variable was the teaching method (module or traditional) and the dependent variables were student knowledge, attitudes, and applications of pain content, as well as preferences for one method over the other. For the longitudinal phase, the student perceptions of learning were retested twice during the following academic year.

### *Subjects*

Only those who received lecture/demonstration instruction are referred to as "traditional students". This method involved integrated and incidental lecture content and seminar discussions of pain, which were relevant to pediatric, obstetric, surgical, and psychiatric nursing content and practice.

Those who were instructed by means of the pain module, as well as in the traditional method, are referred to as "module students". Although receiving instruction via the module only, with no traditional teaching, would have been methodologically superior, this was considered to be ethically unacceptable.



The 58 female third-year baccalaureate students involved in courses on nursing adults and children participated in the study. Excluded were male, post-RN, and repeating students. Written informed consent was obtained.

Table 1  
*Study Design*

Phases	Experimental						Longitudinal								
Independent Variable															
Pain module															
Module Group	***														
Traditional Group	***														
Month	1	3	5	7	9	.....	13	15	17	19	21				
Dependent Variables															
Knowledge Pretest	K1														
Posttest			K2												
Attitudes Pretest	A1														
Posttest					A2										
Learning Time1			L1					L2							
Time2											L3				
Time3															
Nursing Process					N										

## *Procedures*

After knowledge and attitude pre-tests were completed by all students, the module was given to half the students by Laschinger or by Jerrett. The students were randomly assigned to either the module or traditional groups for the first two of the eight six-week rotations of the academic year. Thereafter, the module and traditional students were systematically rotated and mixed with each other and with the other six teachers not acquainted with the module content.

Three months later (during their fifth clinical rotation), knowledge post-test data were collected. Later, toward the end of the academic year (early in the last clinical rotation), attitude post-test data and nursing care plans were collected. The students were not aware that these nursing care plans were to be analysed. This deception was necessary in order to isolate the module effect and thus to measure the application of general pain knowledge. In the consent forms, students had been informed that some deception was involved. After the deception was revealed, subjects were reminded of their option to withdraw, but no one chose to do so.

All teachers were blind to student data, and only two of the eight teachers were aware of the module content. The module students were asked not to share module content with the traditional students and both groups reported not having done so. Coding and analysis of the data were done by a research assistant and by Burke: both were unaware of the students' names and group placement, and neither was involved in clinical teaching.

At the end of the experimental phase (late in the last clinical rotation and after all aforementioned post-testing), the traditional students were also given the module. At the beginning and the end of the following academic year students were retested for perceptions of their learning by the modular method. Of the original students, 42 remained: some were no longer in the class, a few did not return the questionnaire, four reported not actually doing the module, and three did not consent to be a part of the longitudinal study.

## *Instruments*

*Knowledge.* This is a brief 12-item true and false test to determine the students' knowledge of the content of the module. It was developed for the study by Jerrett and Laschinger and was considered to have face validity.

*Pain attitudes.* Twenty of the 60 items were selected from the Davitz and Davitz (1980) tool which describes a variety of adult and child patients with different illnesses and injuries that students were likely to encounter. Items were purposively selected to reflect the likely knowledge and experience of

students at this point in the curriculum. Item numbers from the 1980 Davitz and Davitz version were 1, 2, 4, 9, 11, 12, 15, 20, 24, 25, 29, 30, 33, 34, 42, 45, 46, 56, 58, 59. Students rated the degree of psychological distress and physical pain that they felt the person was experiencing in each situation.

This instrument has demonstrated concept validity in its ability to show significant differences in perceptions of pain in relation to the stage of illness and occupation of the perceiver (Lenburg, Glass, & Davitz, 1970). As well, it was used to measure whether or not the length of time a student nurse had been in an educational program was related to perceptions of physical pain and psychological distress (Lenburg, Burnside, & Davitz, 1970). Some evidence for face validity may be inferred because the tool was developed by experienced nurses with the aim of describing actual patient situations. Furthermore, the instrument has shown its robustness by demonstrating differences in study-specific versions of between 16 to 60 items.

*Learning preference.* Huckabay's (1981) affective measure was used to tap the students' satisfaction with the method of instruction. The wording was altered slightly to focus on the method of teaching of the pain content in the course. The instrument consists of 10 questions constructed on a 10-point Likert-type scale, ranging from unfavourable to most favourable.

Face validity of the instrument as a measure of the perceived mastery, based on Bloom's (1971) theory, was demonstrated with a 93 percent agreement between five judges. Test-retest reliability after 3 weeks for 20 of Huckabay's students yielded a Spearman rank correlation of .63,  $p < .01$  (Huckabay, 1981).

*Nursing Process Analysis for Pain (NPAP).* The NPAP instrument contains scales to rate nursing care plans on the specificity and applicability of the data, diagnosis, intervention, and evaluation phases of the nursing process. Working from operational definitions, critical indicators were developed across a seven-point scale, ranging from unacceptable to excellent. Face validity was obtained by involving eight faculty members in the early developmental phases. Interrater reliability on 15 care plans showed 88 percent agreement within one scale point, and 92 percent within two scale points. The research assistant was trained to achieve 80% agreement with Burke and was monitored throughout the content analysis and coding.

### *Data analysis*

The pre-test/post-test data were analysed for differences between module and traditional students, using analysis of covariance with pre-test scores as

covariates and post-test scores as mean effects. For the nursing care plan data, t-tests were used to examine differences between student groups (Campbell & Stanley, 1970). Alpha was set at .05. For the NPAP a decision was made to accept as educationally significant only those differences which were two scale points or more and which were also statistically significant.

## Results

### *Question 1: Knowledge*

The students taught by the module method, as compared to those who received only lecture/demonstration instruction did not have greater increases in knowledge (as measured) with regard to pain. The knowledge questionnaire showed no significant differences between groups on total scores or on individual items before or after the module.

A post hoc analysis was done on two competing hypotheses. Specifically, a compliance hypothesis was examined (did the students do the module activities or not?). For example, with regard to viewing the three videotapes in the module, approximately 80 percent of the students reported that they saw the first videotape, and 50 percent saw the second and third. However, even taking the degree of compliance into account in an analysis of covariance, there were still no differences between groups for pain knowledge scores.

A second, competing hypothesis was that previous or current experience with pain affected knowledge. Thus, an analysis of covariance was done between the reported amount of prior experience and of current experience with people in pain. Results showed no significant differences.

Given the nature of the knowledge test it is possible that the non-significant results in the study are attributable to an unreliable, invalid test or to ceiling or inadequate variance problems. Thus, we conclude that Question 1 on knowledge was not adequately addressed with this measure.

### *Question 2: Attitudes toward pain*

Each of the 20 Davitz and Davitz (1980) items has two ratings – physiological and psychological. Thus, 40 comparisons were made on attitudes toward people with pain; of these, only four were significantly different between groups. Since the number of significant items could be accounted for by chance, they are not discussed.



### *Question 3: Nursing applications*

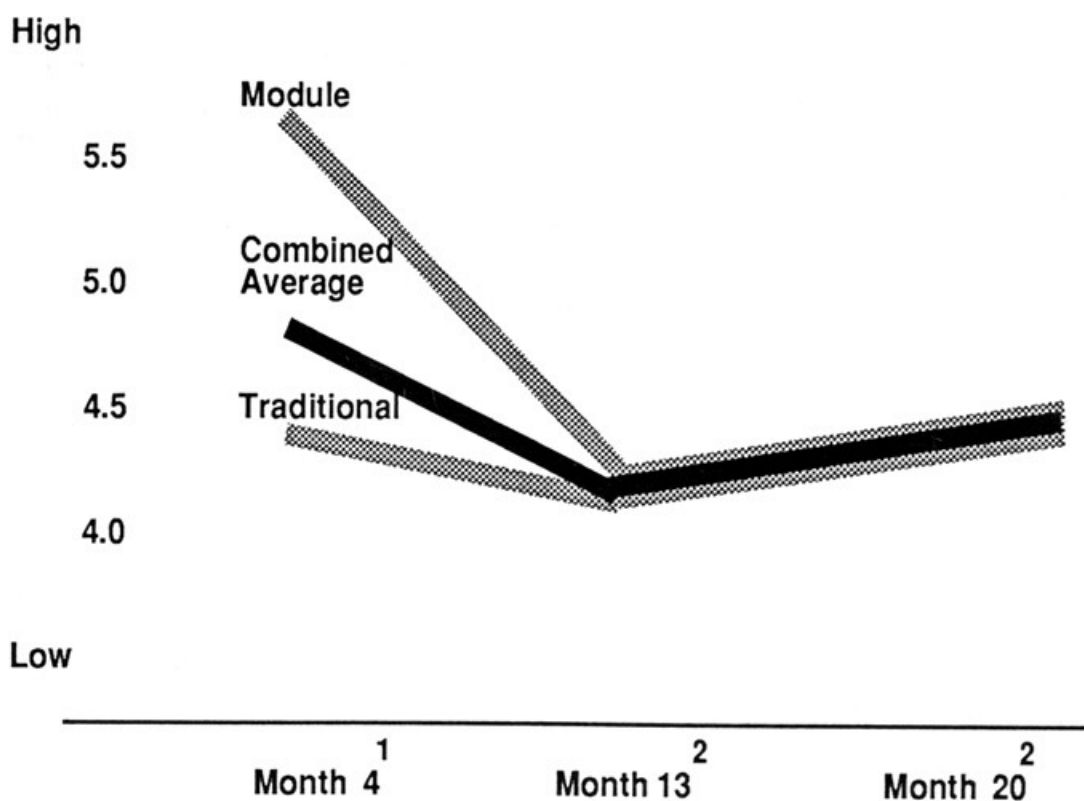
Slightly more than half of both student groups included pain in their nursing care plans. The components of the nursing process examined by the NPAP between module and lecture/demonstration groups showed no significant differences between groups for means of instruction. However, when only statistical differences were considered, the specificity and presence of pain diagnoses and the applicability of pain interventions had statistically different means in the opposite direction of that hypothesized ( $t = -2.3$ , d.f. = 30,  $p = .03$ ;  $t = -2.8$ , d.f. = 30,  $p = .01$ ). Because the scale differences between these group means were less than the two-scale points judged educationally significant, and because the differences were not in the direction expected, it was concluded that the module students would *not* be more likely to have better applications regarding pain in their nursing care plans.

A further content analysis was done by searching in the data base for the words most frequently used as interventions in pain situations. There were no significant differences in the frequency of words used to describe pain, nor were there differences in the types of interventions used between groups.

### *Question 4: Learning preferences*

At the end of the experimental phase (the end of academic year three) the module students showed a greater satisfaction than the lecture/demonstration students with the method by which they had learned. Of the ten items, nine were more favourable for module students than lecture/demonstration students. Of these nine items, five were significant at  $p < .05$  level or better and in the direction hypothesized. The significant items were the extent to which the students felt a sense of achievement or mastery, had a desire to learn more, and enjoyed the content on pain and felt that it was worthwhile.

This initial preference for the modular form over the traditional form of instruction faded during the next academic year, both for those initially in the module group and those who received it after the experimental period. This was a significant drop from the earlier perceptions of the combined group from the first to the second testing ( $t = 3.56$ ;  $p = .001$ ). There followed a slight, non-significant rebound at the end of the study. The pattern was the same for those who had been in the module group initially, but it was expressed slightly more strongly. Eight of the ten items show the same patterns, as can be seen in the average ratings on the Huckabay Learning Preferences Measure in Figure 1.



**Figure 1: Students' mean degree of preference for modular or traditional learning over time**

<sup>1</sup>At this point the modular students rated the modular method and the traditional students rated the lecture/demonstration method.

<sup>2</sup>At these points both groups had used the module and were all rating the degree of preference for modular learning.

## Discussion

The students who were taught the pain content by module did not acquire greater knowledge or exhibit more changes in attitudes than did those who were taught through lectures and incidental teaching. This is surprising because the module students, in fact, had more experience with pain content. However, they were more likely to believe that they had learned more, and they tended to feel more satisfied with their learning.

Given the design of this study, it is not possible to ascertain whether the difference in student perception reflects learning not measured by our

instruments, or whether it reflects the students' attitude that a new teaching method is intrinsically superior. A study design with an alternate teaching method group would help to sort out this dilemma. Nevertheless, Rossi's (1968) honeymoon, plateau, and disengagement-termination stages could account for these effects, with the module students' initial perceptions representing the honeymoon phase. We have seen this pattern repeated many times with the introduction of other new teaching approaches or technologies. The longitudinal results show that these preferences level off and fade over time.

## Summary

Although students preferred the module approach and thought they learned more with this method, no clear differences in knowledge, attitudes, or nursing process, as measured in this study, were found. The initial student perceptions paralleled those found by other investigators and those of many teachers who introduce a new teaching approach or use a new teaching technology.

Because knowledge, attitudes, and application of content is seldom tested beyond teacher or student preferences, the initially perceived benefits may not accrue despite large investments of time and money. This is not to say that student and teacher perceptions of learning and satisfaction with teaching approach are unimportant. But, rather, with the introduction of any new method, the enthusiasm generated should be considered separately from the learning of the content.

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## RÉSUMÉ

### Les méthodes d'enseignement: la méthode modulaire est-elle plus efficace?

Les chercheurs ont comparé les résultats concrets de deux méthodes pédagogiques: la méthode modulaire et le cours/démonstration, pour étudier l'efficacité de la méthode modulaire dans l'enseignement du concept de la douleur. Les sujets, 58 étudiants de baccalauréat inscrits à deux cours de nursing clinique, ont été affectés au hasard à l'un des deux groupes. On s'est servi d'un modèle quasi-expérimental à deux groupes pré-test et post-test. La méthode modulaire a fait ressortir une préférence initiale pour l'apprentissage autonome, mais n'a pas abouti à un niveau plus élevé des connaissances ou à un recours plus grand au contenu du cours pour dispenser des soins infirmiers aux personnes dans la douleur. Les différences constatées au niveau de la satisfaction perçue des étudiants d'apprendre par module reflètent sans doute leur engouement pour une nouvelle méthode d'enseignement qu'ils estimaient supérieure. Au bout d'un an, la préférence pour cet enseignement modulaire avait disparu.



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# CLINICAL PRACTICE: A DILEMMA FOR NURSE EDUCATORS

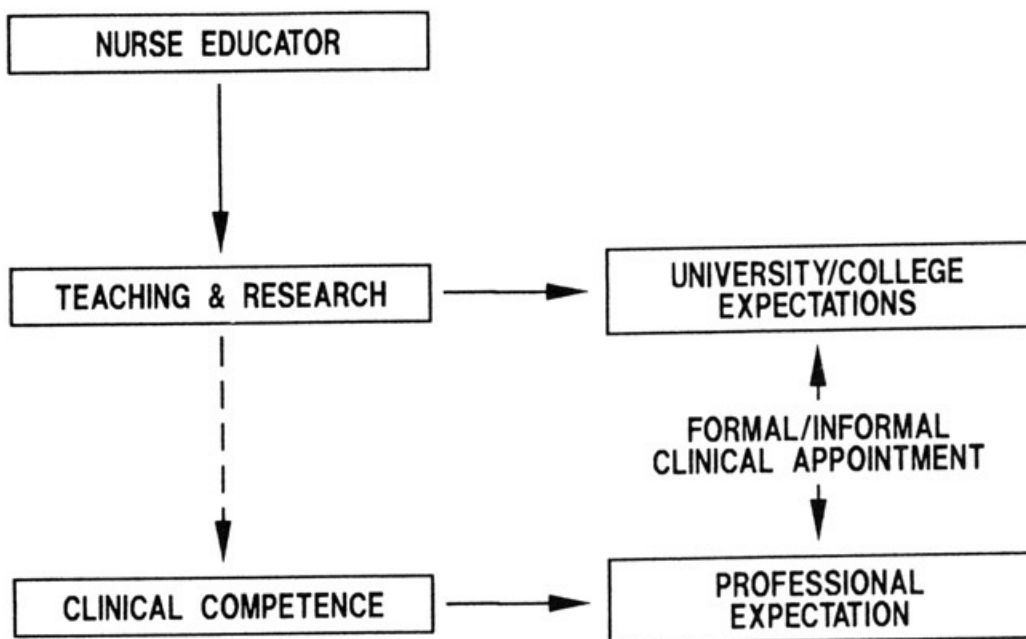
Joan Royle . Dauna Crooks

Nurses on faculty are expected to demonstrate competence as practitioners, researchers and in the traditional role of educator. The dilemma faced by nurse educators in meeting the expectations of the universities and of the nursing profession is illustrated in Figure 1. Achievement of all aspects of the professional role is necessary in order for nursing faculty to attain and maintain collegial status with other health disciplines as well as credibility within the nursing profession. Practice can contribute to scholarship and, thus, provides a vehicle for achieving the goals of academia and promotion and tenure within the university system. Role fragmentation and work overload result when faculty attempt to address each function, separately, within the different social and bureaucratic structures of the university and the health care delivery system.

## Goals of Faculty Practice

Faculty practice may be defined as the participation of nurse-faculty in activities related to client care. The goals of faculty practice are: to improve the quality of patient care and student learning; to promote professional development of nursing faculty and clinical staff; and to facilitate communication and co-operation between nursing service and education. Faculty practice provides a means of facilitating the development of clinical nursing research and the development and utilization of nursing knowledge. Fagin (1986) states that a further, often unstated goal of faculty practice is the empowerment of practising nurses and the nursing profession (p. 143). The level of power vested in nurses within the health care delivery system can be increased through clinical leadership and through demonstration of the full professional role of nursing.

Joan Royle, R.N., M.Sc.N. is an associate professor in the School of Nursing at McMaster University, and a clinical nurse specialist at St. Joseph's Hospital in Hamilton. Dauna L. Crooks, R.N., M.Sc.N. is an assistant professor in the School of Nursing at McMaster University, and Clinical Nurse Specialist, Oncology, at Henderson General Hospital in Hamilton, ON.



**Figure 1: The Nurse Educators' Dilemma**

Student learning is facilitated when clinical staff and students perceive faculty to be credible teachers and competent clinicians. Active participation of faculty in patient care and in decision making in the clinical setting improves communication between the university and the health care agency. Service and education collaboration also provides a means of increasing the relevance of the curriculum. Congruence among the clinical learning environment, the program and the students' learning objectives is a natural and positive by-product of collaboration between clinical staff and faculty. Faculty involved in clinical practice develop an appreciation for the demands placed on clinical staff, and are able to work with the staff, helping them to promote their professional development in client care, teaching and research. Supervision of students in clinical practice thus becomes a mutually rewarding experience for staff, students and faculty.

Clinical practice enables the faculty member to maintain or improve professional competence. As well, it permits the nurse to increase credibility as an educator and a practitioner by providing a focus for scholarly activities and access to a patient population for research. Therefore, an important potential outcome for faculty is the achievement of academic expectations.

### **Characteristics of Faculty Practice**

Faculty practice includes such direct care activities as indepth client assessment, nursing diagnoses – and the planning, implemenation and

evaluation of nursing care for individuals and their families. Indirect care functions include consultation around client care issues and the facilitation of the professional development of staff. The nurse faculty member, as a health professional, is accountable for his or her practice. Client care activities performed by faculty should contribute significantly to the health care of the individual and be documented on the health record.

Clinical practice, as an integral component of the faculty role, contributes to the goals of academia. The practice, therefore, should be scholarly in orientation, should demonstrate the application of scientific knowledge, and should result in research and publications. Recognition of practice by the university provides the faculty member with the opportunity to meet requirements for tenure and promotion.

Supervision of students in clinical practice, or in the occasional clinical activities that are utilized to develop skill or to orient oneself to the learning environment, does not meet the criteria for faculty practice. The purpose of such activities is to facilitate student learning. They do not address the expectations for scholarship or for quality of patient care.

## **Types of Faculty Practice**

### ***Historical***

Faculty practice is a recent development which has evolved as a result of separation of nursing service and education. Practitioners of nursing, who served as role models for beginners in the apprenticeship system that characterized the first 50 years of nursing in North America, could not be described as faculty. The nurse educators who emerged following the movement of nursing education from hospitals to educational institutions, after the Second World War, assumed responsibility only for the teaching of nursing. Nursing service maintained responsibility for the practice of nursing.

In 1956, Dorothy Smith sought and received a dual appointment as Dean of the College of Nursing at the University of Florida and Director of Nursing of the associated new health centre. She set the trend for collaboration between nursing service and education. Schools of nursing began to be seen as places where nursing was taught and practised (Fagin, 1986; p. 142). The literature cites three recognized models of service and education collaboration which have been developed over the past 15 years in order to facilitate and support faculty practice. The unification models established in 1972 at Rush Presbyterian University (Christman, 1979) and at the University of Rochester (Ford, 1980) link the administrative

structures of nursing service and education. Teacher-practitioners are responsible to the one central administration for practice, teaching and research. Despite their strengths, these unification models have not been widely replicated because of the autonomous nature of most health care institutions and universities. The lack of provision for tenure for faculty/practitioners also makes these models unacceptable to many nursing faculty members in more traditional academic settings.

The interinstitutional model, established at Case Western Reserve University in 1961, provides a more flexible approach (MacPhail, 1983; p. 642-644). The system of clinical/academic appointments established in Cleveland influenced the subsequent development of other programs, including that of McMaster University. In this system, the service agency and the university develop guidelines together, producing a network of cross-appointments. They share responsibility for approving, creating, funding and terminating the positions. The service agency assesses the individual for the clinical appointment and negotiates clinical responsibilities. The university assesses the individual for a faculty position and defines expectations for tenure and promotion.

### *McMaster experience*

At McMaster University, joint, associate and clinical cross-appointments in nursing, between the university and the service agencies in Hamilton, have existed since 1968. Joint university/agency appointments are those for which funding is shared by the contracting institutions, with one institution serving as paymaster and, thus, determining benefits and privileges. A more recent development has been the creation of geographic full-time (GFT) positions with the Hamilton-Wentworth Teaching Health Unit. These faculty positions are funded by the Ontario Ministry of Health and are located in the Regional Health Unit. They carry expectations for participation in practice, education and clinical research. Faculty in joint appointments at McMaster hold full-time faculty positions, although this is not necessarily the case in other examples of the collaboration model.

The clinical nurse specialist is the most common clinical role of those faculty currently holding joint appointments. Commitments for service activities vary from 25 to 60 percent of the appointee's time; the most common service/academic time ratio being 50/50. All are involved in direct and indirect client care activities. Clinical teaching of students in the established practice setting is also expected of all joint appointees. Students' learning experiences usually involve the clients of the joint appointee from the in-patient unit, the clinic or in the community.



Most joint appointees are involved with the development and evaluation of clinical projects. Many are currently participating in research projects which are primarily collaborative in nature. One outcome of several of these activities has been the promotion of interagency collaboration. Examples of recent clinical and research activities of faculty with the Teaching Health Unit include:

1. The development and implementation of critical appraisal work-shops for the nursing management team;
2. work with staff nurses to develop research proposals and submit them for funding
  - a. to evaluate an educational program designed to decrease the mis-use of infant car seats,
  - b. to evaluate the effects and costs of a hospital public health nurse liaison program;
3. the development of a health education and health promotion program for immigrants attending English as a Second Language class in Hamilton-Wentworth (600 students are currently enrolled in this program);
4. the organization of a workshop on nursing theory for community health nurses; and
5. the development of geriatric client assessment and care plan forms.

Associate appointments are granted to university-funded faculty by service agencies. Faculty holding these appointments are involved in direct client care or consultation. Practice commitments usually involve half to one day per week, in clearly defined roles such as: consultant to the Intensive Care Unit; or practitioner in specialty clinics or clinical programs, for example, the chronic pain clinic and perinatal program.

Clinical appointments are those given by the university to nursing staff that are funded by a service agency that the appointees contribute to the educational and research programs in the School of Nursing. Most clinical appointees act as clinical preceptors to Level Four B.Sc.N. students or to nurses who are enrolled in the graduate programs and serve as resources to students in their area of expertise. Clinical appointees are expected to meet university standards for promotion but, as no monetary commitment exists, are not granted tenure by the university. Access to university resources has stimulated a recent increase in research activities among some clinical appointees.

In addition, informal arrangements for faculty practice are made when formal appointment agreements do not exist with an agency, when consultation, a research project or clinical practice is negotiated for a time-limited period, and enable faculty to establish a clinical role which will lead to an associate appointment.

## *Trends*

Shared appointments that are found in the models developed at Case Western Reserve University, Rush University and the University of Rochester have demonstrated that the academic/practitioner role does work. Criticisms of these models have been directed at the lack of research outcomes and at their institutional nature. Recent trends include arrangements for practice in community settings and greater emphasis on clinical research as an expected outcome of faculty practice. The geographic full-time faculty positions, established with the Teaching Health Unit and McMaster University, provide an example of faculty practice in the community with research as an expectation.

The Robert Wood Johnson Nurse Faculty Fellowships in Primary Care Program was established in 1977 to help prepare nursing faculty for leadership roles in primary nursing, with emphasis on research, primary care curriculum development and clinical competence (Mauksch, 1985; p. 142). The Foundation is currently sponsoring a Clinical Nurse Scholars Program which is exemplified by the theory-based practice established by Sister Callista Roy. She views research, patient care and education as being integrated in the one role of clinical nurse scholar (Roy, 1985; p. 200). Both programs have contributed to the development of leaders in academic nursing practice.

Faculty group practices, now found in the United States, are another viable model for the integration of nursing practice, research and education. In a survey of 23 group nursing practices, Rosswurm (1981) found that they provided greater flexibility in schedules, and were generally incorporated within a health care agency. The seven practices in the group that were based on a particular nursing theory ranked highest in clinical research.

There are many examples in the literature of independently arranged professional faculty practice. Most such arrangements occur within teaching hospitals or university affiliated clinics.

Other types of practice may be described as "faculty who practise" as opposed to faculty practice. These take the form of dual appointments, independent practice and moonlighting. They hold no expectations for the integration of scholarship and teaching with the practice role, although such outcomes may result. These arrangements usually occur when the education and service institutions have no established mechanisms for collaboration.

## Factors Hindering Faculty Practice

Professional traditions, institutional bureaucracies, lack of structure and support for practice activities and personal risk all hinder the development of faculty practice.

The traditional split between nursing service and education has led to a separation of the educator and practitioner roles. Nurses with research preparation are primarily found in the academic settings. In the past, nursing research has focused on learning and learners and on nursing administration. Research that is related to the practice of nursing is a more recent development. Nursing faculty have become physically isolated from the realities of the practice setting. They lack responsibility for the quality of nursing care and authority to influence it. They are dependent upon service administrators and physicians to gain access to clients who will be subjects for student learning, practice and research. As guests in the practice setting, they lack credibility as practitioners.

Differences in the structure and function of service and academic institutions are also a hindrance. Most health care institutions and universities are independent organizations. Few settings provide an environment conducive to the establishment of shared positions in nursing. The bureaucratic structure of hospitals makes it difficult for nurses to be autonomous practitioners, with control over their time and activities. The division of time and energy between two systems can result in work overload and a sense of not belonging to either system (Joel, 1983; p. 53). Client care activities often lack flexibility and may conflict with teaching or research responsibilities.

In service settings, where patient care is the primary concern, directors of nursing may not perceive a need for the expertise of faculty and may not value clinical nursing research. The financial constraints of the health care system also limit scholarly activities which are often viewed as extraneous.

Interagency agreements for faculty practice exist only in a few settings, most of which are in health sciences centres. When formal structures are absent, faculty wishing to practise must obtain support from both the dean of nursing of the university and from the director of nursing service. Roles, responsibilities, time commitments and reimbursement must be negotiated and arranged.

The establishment of interagency agreements for faculty practice takes time and a great deal of effort. Pre-existing expectations in both settings and expectations of individual faculty must be altered in order for faculty to

integrate practice successfully into their traditional role and for nursing service to utilize these additional resources to best advantage. Smith, following her experiences at the University of Florida, identified the failure to apply role theory and theories of planned change to the process of development of the unification/collaboration models as a major failure (MacPhail, 1983; p. 642).

Apprehensions in the education setting that deter faculty practice include lack of peer support and expectations of work overload. Anderson and Pierson (1983), in an exploratory study of the views of baccalaureate faculty engaged in practice, identified perceived work overload as the greatest inhibitor to undertaking practice. They questioned this perception when they found no difference between the working hours of faculty in the unification model group and those in traditional settings. This discrepancy between perceptions of workload and actual working hours was attributed to the fact that one-third of the faculty in the non-unification model group did their practice during the summer. The sense of frustration experienced by the unification model group in mastering the expectations for the dual roles may have contributed to their perceptions of work overload (Anderson & Pierson, 1983).

Universities, in turn, have not traditionally recognized clinical practice activities for tenure and promotion. Faculty are expected to be clinically competent as part of their educator role in the clinical supervision of students. Client care activities may be viewed as an additional function and considered as service to the community. Few schools of nursing have formal practice policies, requirements or remuneration policies (Andreoli & Musser, 1986). Two classes of faculty are created: the academic stream leading to tenure and the non-tenured clinical group. The resulting tendency to reward research over practice reinforces the idea that practice is an appendage to the usual faculty role.

Inconclusive evidence about the research outcomes of faculty practice may further inhibit faculty from seeking practice. Evaluation of unification/collaboration models has been limited. Supporters of faculty practice point out that, when the schools at Case Western Reserve, Rush and Rochester were measured by external raters against the total population of U.S. schools, all were ranked in the top 20 in terms of publication records and professional prestige (Ford, 1985; p. 200). Christman (1985) attributed to youth the tendency of Rush faculty members to publish primarily in clinical journals. As evidence of greater productivity, he cited the fact that 72 research investigations were in progress. Experience of the authors of this report support the assumption that faculty who are beginning practice spend much of their initial time creating an environment that is



conducive to clinical research. Research productivity may, therefore, be limited initially, but should increase with experience. At McMaster University, where almost all faculty are involved in some type of clinical practice, research productivity has not been hindered and may, in fact, have been increased. In 1983-84 research grants to the McMaster University School of Nursing from the major funding agencies constituted approximately two-thirds of the total funding received by the nine Ontario university schools or faculties of nursing (Mohide & O'Connor, 1986). Twelve (68.4%) of the 19 funded and unfunded studies listed for McMaster School of Nursing related to clinical practice. Of the 41 research projects listed for the 9 Ontario university schools or faculties, 55.4 percent were categorized as clinical.

### **Strategies for Facilitating Faculty Practice**

Table 1 lists important strategies for encouraging and facilitating faculty practice. Administrative support has been found to be the greatest means of encouraging faculty practice (Anderson & Pierson, 1983). This is essential if existing expectations are to be altered. Dickens (1983) concluded, from a survey of nurse administrators for baccalaureate and higher degree schools of nursing in the southeastern United States, that support for career development and role transition was the most important for faculty members to maintain practice activities.

Collaboration between nursing service and education is essential for the development of a structure for faculty practice and a supportive environment. Patient populations are more accessible through systems of clinical/academic appointments. A faculty member who has a formal appointment can avoid the potential problems of control of access to patients by physicians and of competition with other health professionals for clinical resources. Funded positions, such as the geographical full-time faculty appointments, provide greater job security for the faculty member because the positions are permanent and expectations for practice, research and teaching are clearly defined.

Recognition of clinical practice activities as a requirement for tenure and promotion is essential. Strategies to promote clinical practice include the establishment of guidelines by the school or faculty of nursing, and clear communication of the need for all faculty who teach students clinically to have practice involvement. If practice is not seen as a requirement, making the option available to those members wishing to pursue this route to advance their scholarly work will enable individuals to concentrate their strengths on their own career development. Each faculty member should have the opportunity to develop a career path that is



appropriate for his or her specific needs and skills. In many universities, much work needs to be done for practice to be recognized as part of the professional role of faculty in practice disciplines. Faculties of health sciences and universities with other health professional programs are generally more supportive of this work.

If practice is to be recognized as contributing to the goals of academia, nurse faculty members must demonstrate valid scholarly outcomes from their practice activities. Research projects, publications and presentations are tangible results which can be evaluated by peers as part of the tenure and promotion process. Outcomes such as the impact on patient care, curriculum development and the quality of student learning are very important, but may be more difficult to demonstrate.

**Table 1**

*Strategies for Facilitating Faculty Practice*

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1. Administrative support
2. Collaboration between service and education
3. Structural mechanisms
4. Job security
5. Recognition of practice for tenure and promotion
6. Demonstration of scholarly outcomes
7. View of practice as integral to faculty role.
8. "Risk taking" and initiation of innovative approaches by faculty
9. Integration of research, teaching and practice activities

Faculty practice is facilitated when faculty members view practice as an integral part of the faculty role and not as an additional responsibility. In an ideal situation, the faculty member should interact simultaneously with patients, students and staff nurses in a clinical setting where he or she is also conducting a clinical research project.

To establish a practice base, the faculty member must find a suitable clinical setting, negotiate goals and job expectations, demonstrate clinical competence and reliability, and establish cooperative and trusting relations with the staff in the setting. The faculty member therefore must be goal directed, willing to take risks, innovative and must demonstrate professional credibility. The individual must be able to work collaboratively within a second system, which may be more bureaucratic in nature and have different values than the university system. Participation in the decision-making process of each institution is key to integration in the two social systems. Realistic expectations help the faculty member to integrate clinical practice into an academic schedule.

## Conclusions

Practice is an achievable expectation for faculty in a practice discipline. The development of a practice base is hindered by the traditional separation of nursing service and education; by the autonomous nature of the institutions; and by the absence of mechanisms for access to clients, reimbursement for service and negotiation of roles and functions. Administrative support and collaboration between service and education are essential for the achievement of faculty practice. Individual faculty must be goal directed, innovative and willing to take risks if they are to develop a realistic and successful practice. They must demonstrate clinical competence, and must be able to work collaboratively with a variety of people with differing values and expectations.

Practice, viewed as an integral component of the faculty role, can help achieve the goals of academia. Practice activities that demonstrate scholarship in the form of research projects, publications and presentations meet the criteria of universities for tenure and promotion. Formal recognition of practice by sectors outside the health disciplines in some universities may require further negotiation and demonstration of the academic nature of practice. Faculty practice promotes collaboration between nursing service and education and can have beneficial results for student learning, the quality of patient care, faculty satisfaction and career development.

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## RÉSUMÉ

### **La pratique des soins infirmiers: le dilemme des responsables de la formation du personnel infirmier**

La pratique des soins infirmiers fait partie intégrante du rôle des professeurs de sciences infirmières et devrait donc contribuer à la réalisation des objectifs universitaires, en permettant la réalisation de travaux de recherche et d'autres activités universitaires. La pratique doit également favoriser la qualité du programme d'enseignement et influencer sur l'apprentissage en clinique; elle doit donc relever la qualité des situations d'apprentissage que vit l'étudiant. La pratique des sciences infirmières par les professeurs doit également contribuer à la qualité des soins dispensés aux malades et favoriser un rapprochement des soins infirmiers et des sciences infirmières. Le professeur de sciences infirmières qui tente d'asseoir son enseignement sur la pratique se heurte aux obstacles résultant inévitablement de la séparation traditionnelle des soins infirmiers et des sciences de l'éducation, ainsi qu'à une reconnaissance insuffisante, dans certains établissements d'enseignement, du rôle que joue la pratique. L'auteur présente des stratégies qui facilitent la pratique des soins infirmiers par le professeur de sciences infirmières et l'intégration de la pratique dans le rôle professionnel global, de manière à lui permettre d'atteindre un niveau de compétence professionnelle et d'assurer son avancement universitaire.

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**Innovations in Nursing Education  
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# GENERAL EDUCATION IN NURSING: Current practices and faculty attitudes

Kum Sook Sohn

Currently in North America, basic education for registered nurses is generally furnished within the higher educational system. However, nursing has a relatively short history in that system. It was not until the 1970s in both Canada and the United States that the majority of nursing programs were provided by colleges and universities instead of hospitals. One of the major reasons for this change was a desire to improve nursing education by providing a good general education background. Nursing history indicates that as recognition of the importance of general education grew, the number of nursing programs in higher education also increased; however, this important relationship has not been well studied. No systematic study of the general education content in baccalaureate and college diploma nursing programs in Canada is available. This is regrettable when one considers that nursing curriculum changes have been epidemic in recent years, and anyone familiar with nursing literature can easily perceive that changes have mainly been concerned with the nursing component of the curriculum but not with general education courses. A sound curriculum change should involve both.

## The Literature on General Education

### *The themes*

Authorities agree that the concept of general education is ambiguous. To make the matter more complex, the term "liberal education", which itself is interpreted in many ways, has been used interchangeably with general education. Conrad (1978) says that it is meaningless to differentiate between these two terms; they have been used interchangeably for too long and by too many people. Nonetheless, it is possible to find general agreement that professional education is basically concerned with the performance of the individual as a worker, while general education is primarily concerned with civic and personal development. The values, purposes and functions of general education differ from those of professional education. In general education the themes of common humanity and of unity are emphasized. In contrast, professional education is limited to the concerns of particular

Kum Sook Sohn, R.N., M.A., M.Ed., is a doctoral candidate at the Curriculum Department, Ontario Institute for Studies in Education, University of Toronto.

people who are engaged in particular professions. Amos (1985) cites several principles adopted by the Association of American Colleges, during a conference held in December, 1983, the purpose of which was to develop a consensus about "Integrating Liberal and Professional Education". They reveal that the Association is also concerned with the concepts of common humanity and unity: "Characteristics in common that mark them as educated people, regardless of the type of undergraduate preparation;" and the "need to emphasize the unity of all learning" (p. 46).

### *The goals*

Three goals of general education that were identified by McGrath in 1959 seem to be found in most lists in the literature on general education: broad knowledge, intellectual skills, and an integrated and self-directed personality. A panel of the Association of American Medical Colleges (1984) concludes that the purpose of a *general professional education* for medical students is acquiring knowledge, skills, values and attitudes. Russell (1959) claims that the goals of cultivating intellectual skills and of developing a self-directed and integrated personality should be served by the faculty of both general and professional education departments. Therefore, even though the primary goals of professional and general education are different, they are not contradictory but serve to complement and reinforce each other.

### *The courses*

There has not been genuine agreement on what constitutes a general education course. Pillepich (1962) and Russell (1959) found that confusion existed among nursing faculty members on this subject. There seem to be two main approaches to classifying general education courses. In the first, all non-nursing courses are considered to be general education. In the second, all courses that are neither nursing courses nor nursing support courses are viewed as general education. In this study, the first approach was used because the second approach is confusing. In that classification for example, physiology is general when taken by a music student and professional when taken by a nursing student. However, non-nursing courses taught by nursing departments are considered professional courses in this study.

## **Method**

### *The questionnaire*

The researcher developed a questionnaire that included 49 questions on nursing faculty's opinions on general education and nine questions on personal information about the respondents. A pilot study was done to

assess the feasibility of the questionnaire. The six respondents indicated that the questionnaire could be completed without much difficulty. However, there were many comments, especially about terminology used in the questionnaire. These comments were reviewed, and most were used as bases for changes to the questionnaire.

### *Terminology in this study*

*General education courses* are non-nursing courses taught by departments other than nursing departments.

*Required general education courses* are courses that are specified by course name and number, and that are required of all nursing students in a program.

*Specially designed courses* are courses that are specifically designed for nursing or health science students.

*Free electives* are courses that may be taken from any discipline.

*Designated electives* are courses that may be taken from specified disciplines.

### *The samples*

The study has two samples a) 54 English language basic nursing programs from which usable program documents were received; and b) 188 nursing faculty and 21 nursing directors of 49 basic nursing programs that responded to the questionnaires.

#### *Sample 1: Nursing programs*

The sample of programs was derived from the responses to a letter, requesting catalogues and school calendars, sent to the directors of all 60 English language basic nursing programs in Canada (baccalaureate = 18; diploma = 42) in February and March of 1983. After a follow-up letter, all but one responded. However, 5 of 59 program directors sent materials that did not contain the necessary information, leaving only 54 programs whose documents could be analyzed.

#### *Sample 2: Nursing faculty and directors*

The sample of faculty and directors was derived from those responding to the request for program materials. In October 1983, a total of 578 questionnaires were sent to the directors of these 59 programs (baccalaureate = 18; diploma = 41). All fifty-nine nursing program directors were asked to fill out one questionnaire themselves and to distribute questionnaires to three faculty members from each year of their program. (Faculty members were defined as full-time faculty who teach in basic nursing programs.) A total of 209 questionnaires from 49

(baccalaureate = 15; diploma = 34) of the programs were returned. These included six from baccalaureate directors, 15 from diploma directors, 73 from baccalaureate faculty and 115 from diploma faculty.

### *Procedure*

Material from 54 programs was examined for general education goals and courses. Quantifiable items were tabulated and expressed in total frequencies and in percentages. However, not all of the 54 programs could be tabulated under all items because some of the catalogues and calendars did not contain all the information needed. Thus, the number of nursing programs for which there are responses will differ for different items. In addition, three diploma programs (all in Quebec) are excluded from data that require credits computation because the extensive general education credits provided by these programs (a total of 72 in each) could distort the general picture of diploma nursing programs.

Information obtained from the 209 questionnaire responses was examined in order to identify nursing directors and faculty's attitudes toward general education goals and courses. Quantifiable items were tabulated and expressed in total frequencies and in percentages. Written opinions and comments were individually examined and then categorized and tabulated for frequencies, when applicable.

### **Findings of the Study**

Results are reported in two major sections: general education goals and courses. In each section, baccalaureate and diploma programs are compared, and the attitudes of faculty in both types of program are compared. Opinions of nursing directors and nursing faculty were each studied separately, although no significant differences were found.

#### *General education goals*

The materials provided showed that most nursing program objectives are profession-related, and that conscious efforts to provide general education are extremely rare. Most program descriptions state objectives that are congruent with those of general education, but apparently are intended as goals of professional education. This is the case for each of the goals of general education identified by McGrath (1959): broad knowledge, intellectual skills and an integrated and self-directed personality.

Twenty-two (baccalaureate = 9; diploma = 13) of 29 programs (baccalaureate = 10; diploma = 19) state that the faculty believe that broader knowledge in major disciplines is useful in strengthening nursing practice:



that is, for professional purposes. This belief can be represented by a typical statement: "Apply knowledge from natural sciences, social sciences, and humanities to nursing practice." Seventeen of 18 nursing programs (baccalaureate = 11; diploma = 7) include development of intellectual skills in their objectives. However, these seem to be related to nursing practice only, not to students' personal lives as individuals and citizens. Problem-solving skills (used in the nursing process) and communication skills are the two intellectual skills most commonly referred to. Fourteen (baccalaureate = 9; diploma = 5) of 18 nursing programs have stated goals related to life-long learning. These are expressed in somewhat different phrases, such as "personal and professional development", "continued learning", "self-directed learning" and "increase own competency". However, all emphasize the importance of life-long learning in connection with the nursing profession, not for students' personal lives.

Statements of goals of general education were rare in baccalaureate and diploma programs and no differences were found. Although the researcher did not intend to study nursing components in this study, the objectives of the 18 programs were reviewed in relation to the goals of professional education. The majority of both diploma and baccalaureate nursing programs emphasize problem-solving skills, therapeutic skills (communication and interpersonal skills), professional conduct, and professional competency through continuing education. Both claim to produce graduates who will practise "professional nursing". There is, therefore, no real difference in the objectives for nursing practices; but that is not to say that the nursing content taught to the two types of student is identical. There is one major difference. Baccalaureate programs suggest that their graduates are potential "leaders" in the nursing profession by emphasizing "leadership skills", "skills to apply research to nursing practice" and "active involvement with community issues". These objectives are not stated by any diploma programs. Thus, the uniqueness of the assumed leadership role for baccalaureate graduates seems to be accepted by both nursing programs.

***Faculty attitudes toward general education goals.*** The heavy emphasis on the profession in nursing programs is not consistent with faculty's attitudes toward general education. The majority believe that they are responsible for preparing students both to be nurses and to lead a meaningful life as individuals and as citizens. They view general education courses having professional as well as general education purposes. However, they seem to consider general education courses related to nursing as more important than courses not directly related to nursing.

The inconsistency between current practices and faculty attitudes seems to indicate that nursing faculty beliefs and opinions are poorly reflected in their programs. This finding agrees with those of Russell (1959) and Pillepich



(1962). However, there is another possible explanation for the inconsistency. Although faculty accept responsibilities for both forms of education, it is possible that they consider that the major responsibility for general education lies with departments that offer the courses. Such an attitude is shown in a statement from one diploma program: "The goals of general education for all students are met through common courses in English, humanities and physical education." Thus, faculty members may believe that simply making general education courses available will fulfill their own responsibilities. However, Russell and Pillepich argue that nursing faculty should be involved in general education.

Although no actual difference was found, the percentage of faculty who believe that there is a difference between the two types of program in terms of general education goals is higher among baccalaureate faculty (about 90%) than among diploma faculty (about 70%). The remaining faculty members believe that general education should be one of the common components shared by both programs, although they believe that the two programs are different.

Exactly how baccalaureate and college diploma programs differ has been debated in nursing. This study reveals that an overwhelming majority of faculty members believe that the two programs are partially different. Extremely few (only three) believe that the two programs are completely different and no one believes that there is no difference between the two programs. About half of faculty, regardless of the program, believes that the two are different because they have different as well as common components. The other half believes that the two programs are different because, in addition to all the diploma components, baccalaureate programs contain other components. Although both beliefs are not reflected in stated general education goals in both programs, general education courses provided by nursing programs indicate that the latter belief reflects the reality more accurately. This issue will be discussed further in the next section.

### *General education courses*

Table 1 shows the average proportion of general education in baccalaureate and diploma programs. Three credits are equivalent to a half-year course and six credits to a full-year course. Both programs require two to three hours of class contact per week for a half-year semester in a three-credit theory course. However, the 18 diploma programs that did specify vary in giving credits for clinical hours. For example, three of the 18 diploma programs do not give any credit for clinical hours, only to theory hours; six give one credit for one to one and a half clinical hours, thus giving clinical hours almost the same credit as theory hours. These nine programs are all from one province. The remaining nine programs give one

Table 1

*Averages of Professional and General Education Course Credits*

	Total Nursing Program Credits	Professional Education Credits	General Education Credits	General Education Proportions
Baccalaureate Programs (N=17)	136	74	62	46%
<sup>a</sup> Diploma Programs <sup>1</sup> (N=18)	122	96	26	24%
<sup>b</sup> Diploma Programs <sup>2</sup> (N=9)	105	79	26	26%

<sup>a</sup>Diploma Programs<sup>1</sup> includes all 18 diploma programs that specified their clinical credits. These programs showed considerable variance in the credits given for clinical hours.

<sup>b</sup>Diploma Programs<sup>2</sup> includes only the 9 diploma programs (of 18) that gave the same credits for clinical hours as the baccalaureate programs (e.g. one credit for 2-3 clinical hours).

credit for two to three clinical hours (except one program which gives one credit for four clinical hours), as do most baccalaureate programs. Because of the variations in credit for clinical hours, diploma programs are presented in two groups. Group 2 includes only the diploma programs that use the same practice as baccalaureate programs do in giving credits for clinical hours, and therefore it seems a more valid group for comparison of program and nursing credits.

A desirable balance between professional and general education courses that has been agreed upon by nursing educators is between 35 and 50 percent. The proportion of general education credits for baccalaureate programs (46%) is in this range, but the proportions in diploma programs (24% and 26%) are well below the ideal.

One reason for the differences seems related to a difficult issue in nursing – identifying different roles between the two types of graduates. There are no clear distinctions between what is expected of the two types of graduates and they have to take the same licensure examination. Diploma program

faculty must cover all materials relevant to "nursing", not "diploma nursing", in a shorter time – two to three years as opposed to the four in most baccalaureate programs. Accordingly, diploma programs have a higher density of nursing courses.

Professional programs have been criticized for the tendency to require only those subjects that support their profession (Dressel, Mayhew, & McGrath, 1959; Pillepich, 1962; Russell, 1959). The results of this study support this criticism. About 70% of general education course credits in both baccalaureate and diploma programs are devoted to courses in natural and social sciences, as required courses or designated electives, or both. Most required general education courses (in both nursing programs) are natural and behavioural science courses that have direct relevance to nursing. Required humanities courses, and courses in natural and social sciences not directly related to and supportive of nursing, are few in number. (See Tables 2, 3 & 4)

**Table 2**

***Number of Programs Requiring Natural Science Courses<sup>a</sup>***

Courses	Baccalaureate Programs (N=18)		Courses	Diploma Programs (N=30)	
	N	%		N	%
Microbiology*	16	89	Anatomy & Physiology*	27	75
Physiology	14	78	Microbiology*	15	42
Chemistry*	11	61	Pathophysiology*	7	19
Anatomy	10	56	Biochemistry*	4	11
Biochemistry*	9	50	Physiology	3	8
Biology	8	44	Pharmacology*	3	8
Nutrition*	6	33	Pathology*	3	8
Pathology*	4	22	Immunology*	3	8
Immunology*	3	17	Mathematics	2	6
Anatomy & Physiology	3	17	Anatomy	1	3
Epidemiology	2	11	Nutrition*	1	3
Pharmacology	2	11			

<sup>a</sup>Courses are listed in order of frequency of their being required in each type of program.

\*Two of these courses are integrated with one another and offered as one course in some programs (Baccalaureate = 4; Diploma = 8). For example, one baccalaureate program and three diploma programs combine microbiology and immunology into one required course.

The data in Table 2 indicate that anatomy, physiology, and microbiology are the natural science courses most commonly required by both baccalaureate and diploma programs. All but one baccalaureate program require physiology, either as a separate course or integrated with anatomy. However, the remaining program requires physiology provided by the nursing department. Thirteen of 18 baccalaureate programs require anatomy. Of the remaining four programs, two require anatomy taught by nursing departments and one indicates that it is incorporated into nursing courses. Microbiology is required as a separate course by 13 baccalaureate programs and, as integrated with another course, by another three baccalaureate programs.

Twenty-seven of 36 diploma programs provide anatomy and physiology as an integrated course and one program provides them as separate courses. Four additional diploma programs provide anatomy and physiology, but taught by nursing departments. It seems reasonable to expect that the remaining diploma programs incorporate anatomy and physiology into nursing courses. While most baccalaureate programs provide anatomy and physiology as separate courses, most diploma programs provide them as an integrated course. Some baccalaureate and diploma programs provide two natural science courses as an integrated course (Table 2).

In many diploma programs, an integrated anatomy and physiology course is the only required natural science course, but, in some, one more course is required (most commonly microbiology, followed by pathophysiology). In most baccalaureate programs, in addition to anatomy and physiology courses, biology or microbiology is required as well as chemistry or biochemistry. In some programs (baccalaureate = 6; diploma = 14) nursing departments provide a natural science course. Anatomy and physiology, pharmacology, pathophysiology and nutrition are courses often taught by nursing departments. However, even in programs that do this only one natural science course is usually provided.

Table 3 shows that psychology and sociology are the two most frequently required social science courses. Although the table seems to indicate that sociology is the most generally available course among diploma programs, psychology, under different course names, is actually the most available in both baccalaureate and diploma programs. Seven diploma programs require developmental psychology instead of psychology and nine diploma programs require developmental psychology in addition to psychology.

The main difference in social science curricula between the two programs is that no diploma programs require research and statistics courses, while many baccalaureate programs do. The actual numbers of baccalaureate programs requiring those courses (particularly research) are higher than the

Table 3

*Number of Programs Requiring Social Science Courses<sup>a</sup>*

Courses	Baccalaureate Programs (N=18)		Courses	Diploma Programs (N=36)	
	N	%		N	%
Psychology	15	83	Sociology*	30	83
Sociology#	11	61	Psychology*	27	75
Statistics*	8	44	Developmental		
Developmental			Psychology	16	44
Psychology#	8	44	Growth and		
Growth and			Development	9	25
Development	3	17	Family	8	22
Research*	3	17	Interpersonal		
Anthropology#	3	17	Relations	6	17
Business	2	11	Abnormal		
Social			Psychology*	2	6
Psychology#	2	11	Social		
Abnormal			Psychology*	1	3
Psychology	2	11			
Physical					
Psychology	1	6			
Political Science	1	6			
Family#	1	6			

<sup>a</sup>Courses are listed in order of frequency of their being required in each type of program.

\*Two of these courses are integrated with one another in some programs (Baccalaureate = 2; Diploma = 6).

#Six baccalaureate programs ask students to make an option(s) from two or three of these courses. For example, two programs ask students to take either sociology or anthropology.

number appearing in Table 3. While research is often taught by nursing departments (9 out of 12), statistics is seldom taught by nursing departments (2 out of 10). However, these are not included in the table because this study defines general education courses as non-nursing courses that are provided by departments other than nursing. Half of the baccalaureate programs require both statistics or research courses that are taught either by nursing or by other departments (two of them provide a course which integrates both research and statistics). Three other programs require only research, while two programs require only statistics. The remaining four programs do not require either course; however, two of the



programs offer research as a senior elective. Thus, both statistics and research courses have important places in the majority of baccalaureate programs.

**Table 4**  
*Number of Programs Requiring Humanities Courses<sup>a</sup>*

Courses	Baccalaureate Programs (N=18)		Courses	Diploma Programs (N=36)	
	N	%		N	%
English*	4	22	English/		
Philosophy	2	11	Communication	22	61
Ethics	1	6	Ethics	7	19
Religion	1	6			

<sup>a</sup>Courses are listed in order of frequency of their being required in each type of program.

\*One baccalaureate program requires students to take either English or French and another program requires students to take both English and French.

Both programs devote a small proportion of general education credits (baccalaureate = 10%; diploma = 16%) to humanities (Table 4). In addition, many of the humanities courses (17 out of 29) required by diploma programs are specially designed for nursing and/or health science students.

Twelve of 18 baccalaureate programs and 25 of 28 diploma programs require specifically designed courses in natural sciences , social sciences, and the humanities offered by departments other than nursing. Some natural science courses such as anatomy, physiology, and biochemistry are offered as specially designed courses by more than half the baccalaureate programs. Anatomy & physiology, microbiology, English/communication, and developmental psychology are offered as specially designed courses by more than half the diploma programs. It is common to find courses titled "Anatomy & Physiology for Nurses", "Nursing Psychology", or "Nursing Sociology".

A majority of faculty members believe that general education courses in each program should be different. Current general education course requirements support the assumption that, in addition to having all diploma

components, baccalaureate programs have different components. For example, most baccalaureate programs require a broader range of natural science courses than do most diploma programs; and social science courses such as statistics and research are required only by baccalaureate programs. For diploma programs, no distinctive components were identified.

Both diploma and baccalaureate nursing faculty seem to agree that natural and social science courses should be offered to both types of students, and that courses that are not directly related to nursing should only be offered to baccalaureate students. In addition, faculty of both nursing programs agreed that natural and social science courses that are supportive of nursing should be offered in greater depth to baccalaureate students.

Faculty members are more or less equally divided as to whether or not some general education courses, particularly in the natural sciences, should be specifically designed for nursing students (and perhaps health science students). The most common reason given by those in favour was that such courses are easier to learn when adapted to nursing purposes. Several faculty in both programs commented that specially designed courses allow faculty to focus directly on nursing content and to omit irrelevant materials. The most common reasons given by faculty who believe that general education courses should be broad and general were two: first, that specially designed courses might destroy the inherent value of general education; and secondly, that they will reduce the opportunities for nursing students to associate with students from other disciplines. Other reasons given were: specially designed courses could be "watered down"; they could limit the application of knowledge in other fields; and they could become problematic for credit transfer for further degrees.

### **Discussion and Implications**

The study indicates that nursing faculty attitudes and high concern toward general education are not reflected in the descriptions in program information materials. It seems necessary to take steps to bring nursing faculty concern into action.

The aim of general education is to develop students as educated persons, regardless of their chosen professions. General education is expected to cultivate common humanity by developing common knowledge, intellectual skills, and values that are important for both personal and professional life. The nursing profession works in collaboration with other health professions as well as with other fields such as law and politics. Sharing common knowledge, intellectual skills, and values with other disciplines will assist the nursing profession in improving its status.

General education is also expected to develop unity or integration of an individual's knowledge, skills, and personality. Although terms such as "unified curriculum" and "integrated curriculum" indicate efforts to implement the concept of unity, such efforts are mainly limited to the integration and unity of nursing knowledge and nursing skills. Quiring and Gray (1979) found that non-nursing courses in 53 baccalaureate programs in the United States were based on a patch-work rather than a systematic design. Both general and nursing components should be integrated meaningfully, instead of concentrating only on nursing. The implications of the study results will be discussed in three sections: general education goals, general education courses, and specially designed general education courses.

### *General education goals*

Faculty in both baccalaureate and diploma nursing programs value general education. Programs should therefore reflect these concerns. Faculty (baccalaureate = 90%; diploma = 70%) agree that the goals of general education include developing personality, self-understanding, and clarifying values in order to lead an effective and meaningful life as a person and citizen. The three outcomes of general education (broad knowledge, intellectual skills, and an integrated personality), identified by McGrath (1959), can be used as a general guideline in developing specific goals. A wide range of courses will help students acquire a broad knowledge base and understand the different intellectual skills and values involved in different disciplines, and the process will require a long-term commitment by both general and nursing department faculty.

### *General education courses*

Increasing the proportion of general education seems desirable in most diploma programs because most do not maintain the recommended balance. In a study by the Association of American Medical Colleges (1984) the panel recommends that broad study in humanities and social sciences is just as essential as study in the natural sciences. Both types of programs presently require very few humanities courses. It seems desirable to increase the number of humanities courses in order to expose nursing students to fundamental human concerns instead of concentrating only on the nurse-patient relationship. In recent years, many nursing educators have emphasized the value of humanistic concerns, such as ethics and value clarification, in nursing education.

It may also be desirable to expose students to some religious studies. Many people believe in their spiritual natures and live according to the beliefs within their chosen religion. Nurses should therefore have reasonable knowledge about different religions. Out of 54 nursing programs studied,

only one baccalaureate program requires religion courses and two other programs offer them as optional designated electives (e.g., any courses from religious studies and philosophy). Religion should also be offered to nursing students for personal enrichment. They should be given chances to learn the main issues about human and spiritual concerns, and to make their own decisions about those issues.

An increase in the number of social science courses within both baccalaureate and diploma programs would increase the ability of students to understand such social constructions as political science, economics, business, international affairs, and government. Now most required social science courses are ancillary to nursing (see Table 3), and are more or less concerned with understanding man as a social being but not with understanding social structure as a whole. The great majority of nurses are women, and women have traditionally been less active in social structures. This should change.

This researcher agrees with the opinions of McGrath (1959) and Russell (1959) that, to improve professional status, sound general education is essential. Amos (1985) also claims that "The integrity of professional nursing education can only be assured if there is an appropriate relationship between liberal education and professional education" (p. 44).

### *Specially designed general education courses*

General education courses are often viewed as being for professional purposes only. This is particularly evident in the practice of providing general education courses that are specially designed for nursing or health science students. Most diploma programs (89%) and two-thirds of the baccalaureate programs (67%) offer such courses. These courses should be limited. One of the main rationales for nursing education to move into the higher educational system was to provide learning opportunities that are enjoyed by other professions. Providing many general education courses that are designed only for nursing or health science students vitiates this purpose. In extreme cases, other nursing students are the only classmates nursing students have during their program years. Diploma program faculty showed remarkably low satisfaction with their program's performance in providing nursing students opportunities to share ideas and experiences with other students. Forty-eight percent of them were dissatisfied with that performance, while only 14% of baccalaureate faculty were dissatisfied.

In some situations, general education courses are specially sequenced to meet the special needs of students who are majoring in those courses. In such cases, specially designed courses for nursing or health science students



are important; however they should still be broad enough to be offered to students from other disciplines.

One method of encouraging the student to acquire a good general background would be to introduce free electives in their programs. Students would make choices according to their own interests and would mix with other students on the campus. Baccalaureate programs offer a considerable proportion of general education credits as free electives (22%), although there is limited emphasis on the humanities. More than half of the diploma programs do not offer any free electives.

However, although it is desirable to give some freedom of choice to students, it does not seem ideal to leave so many elective courses completely open, especially when no, or extremely few, humanities courses are required. It is therefore suggested that, of the total credits for humanities and free electives, more credits (about 60%) be given to humanities than to free electives (about 40%), thus ensuring that all students take an adequate number of humanities courses. In addition, nursing programs which offer many general education courses supportive of nursing could require students to use free electives only for courses unrelated to nursing.

## Conclusion

This study examined the practice of general education in 54 baccalaureate and diploma programs by studying program information materials and it examined the attitudes of nursing directors and faculty toward general education by studying 209 questionnaire responses. The study reveals that very few programs have stated goals of general education and that most of the required courses are courses directly supportive of, and relevant to, nursing. However, the majority of nursing faculty consider general education to be as important as professional education.

Nursing educators should design curricula that will cultivate not only professional competency but also personal competency – knowledge, skills and character that are required to live life effectively. Long-range considerations of improving nursing's status as a profession seem to depend just as much on wisdom gained from a knowledge of humanities and social sciences that are not directly related to nursing as on knowledge of the natural and behavioural sciences that are supportive of nursing.



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This study was done as the author's Master's thesis (University of Toronto, 1984).

## RÉSUMÉ

### **Formation générale en sciences infirmières: pratiques actuelles et attitudes des professeurs**

La présente étude a pour objectif d'approfondir le cadre des programmes de formation générale en sciences infirmières. Plus précisément, on s'est penché sur les pratiques actuelles et les attitudes des professeurs à l'égard de la formation générale et l'on a comparé les programmes de baccalauréat et de diplôme d'études collégiales au Canada. Le chercheur a examiné 54 programmes de sciences infirmières (baccalauréat = 18; diplôme = 36) en se fondant à la fois sur des prospectus et des annuaires et sur les opinions des directeurs et des professeurs des programmes de sciences infirmières recueillies par le biais d'un questionnaire adressé à 21 directeurs de sciences infirmières (baccalauréat = 6; diplôme = 15) oeuvrant dans le cadre de 49 programmes. Les résultats indiquent que les deux types de programmes sont axés avant tout sur la formation professionnelle, tout particulièrement les programmes de diplôme. On a également noté qu'il existe des différences entre la mise en pratique des programmes et les attitudes des professeurs. La majorité des professeurs de sciences infirmières sont d'avis que la formation générale et la formation professionnelle sont aussi importantes l'une que l'autre, bien que les pratiques de deux types de programmes soient axées sur la formation professionnelle. D'une manière plus générale, on a noté de plus grandes divergences d'opinion entre les professeurs d'un même type de programme plutôt qu'entre les professeurs des deux types de programmes. La répartition des opinions parmi les professeurs de niveau collégial et les professeurs de niveau baccalauréat suit les mêmes schèmes sur de nombreuses questions.

## CALL FOR RESEARCH ABSTRACTS

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# TEACHING PRIMARY HEALTH NURSING IN THE UNIVERSITY OF NEW BRUNSWICK SCREENING CLINIC

Nancy C. Wiggins

According to the World Health Organization (1978), primary health care is:

Essential health care made universally accessible to individuals and families in the community by means acceptable to them, through their full participation and at a cost that the community and country can afford. . . . Primary Health Care addresses the main health problems in the community, providing promotive, preventive, curative and rehabilitative services accordingly. (p. 34)

Baccalaureate nursing students must be prepared to assume changing roles in primary health care (Boudreau, 1972; New Brunswick Association of Registered Nurses, 1974). While primary health care is not a new area of responsibility for the community nurse, today's nursing students need better preparation to function on a first contact basis in an emerging health care system. The potential contribution of the nursing profession to the control of health care costs is obvious. Much nursing activity in primary health care should occur in the preventive realm with families who are seeking early assessment and referral. A baccalaureate nursing curriculum, which incorporates the above philosophy, provides an opportunity for faculty and students to experiment with new primary health nursing roles.

## Curriculum Development

Since the University of New Brunswick (UNB) baccalaureate nursing program was instituted, clinical practice in home visiting has been considered an essential component. The challenge of planning and facilitating health-related programs for consumer groups was added, for junior and senior students, in the mid-1970s. To provide additional clinical exposure, student observation and participation in various community nursing agencies has been included.

Nancy C. Wiggins, B.N., M.A., is Associate Professor at the University of New Brunswick. She teaches and supervises in the UNB Screening Clinic.

A full curriculum revision at UNB began in 1972 and the first class entered the new system in September, 1976 (Pepler, 1977). During this time a faculty sub-committee was formed to investigate the feasibility of utilizing a proposed "clinic" as a third-year clinical experience. The clinic, it was thought, could be associated with a twelve-credit-hour course entitled "Primary Health Nursing", which was to be offered in September, 1978. It would augment the students' experiences with families, groups and agencies. The university calendar description (1978) reads:

This course concentrates on the provision of primary health care to individuals of all ages, to families, and to groups whose needs may lie at any point along a health-illness continuum. The focus is on the teaching and counselling roles and on the assessment, screening and decision-making skills used in various ambulatory care settings. . . . (pp. 416-417).

### Clinic Development

The nursing literature about those years is replete with references to the expanding role of the nurse and nursing's potential contributions in primary care (Boudreau, 1972; Gardner & Fiske, 1981; Kinlein, 1977; World Health Organization [WHO], 1974).

The WHO Expert Committee (1974) commented:

Developing curricula in which basic learning occurs in a practical setting is another test of faculty ingenuity. The broad base of primary health care is the area in which most effort will be required. The development of community practice sites, the adaptation of content and educational methods to a wide variety of persons to be trained as primary health workers, and the construction of a programme that provides the scope and quality of learning experiences desired all demand keen imagination and innovation. (p. 24)

Subcommittee members were anxious to demonstrate innovative planning through a sequence of self-development, clinical practice, teaching and research. To determine the possible extent of assistance and cooperation with the clinic by local health professionals, the Department of Health, physicians and optometrists, and relevant voluntary agencies, such as the New Brunswick Kidney Foundation, the New Brunswick Heart Foundation and the Canadian National Institute for the Blind, were contacted. Discussions were also initiated with university administration.



A clinic philosophy and program goals (with accompanying educational and operational objectives) were drafted and presented to the Nursing Faculty Council for approval in December, 1977. From the feedback received, it was evident that the start-up and continuing costs of an on-site clinic would pose a significant hurdle. The faculty and university were accustomed to using off-campus clinical sites where the cooperating agencies absorbed many of the costs of student practice. Consequently funding proposals were submitted to various external agencies and the university administration. In the process the clinic became more clearly delineated.

### *Rationale and objectives*

In 1977 twelve hundred faculty and staff at UNB had no preventive or other health services available to them on campus. Concerns had been voiced by the Personnel Office to a university employee assistance (EAP) committee with regard to the current employee morbidity statistics. A nursing faculty member sat on that particular committee and, along with the clinic subcommittee, initiated a limited community assessment. It appeared that interest in personal health and stress-related conditions was high among employees on campus. It was also noted that previous clinical contacts between nursing students and university staff in home visits and groups had resulted in mutually positive outcomes. The students had been able to gain acceptance as "helpers" in those relationships. There appeared, therefore, to be justification for an "employee health centre" staffed by student primary health nurses.

The following broad objectives were formulated in 1977.

1. (To) provide an innovative clinical area where nursing students, under faculty direction, can develop skills in screening, health teaching and counselling.
2. (To) maintain and improve the health of university employees through direct (preventive) nursing care and referral to other health workers.
3. (To) study the impact of nursing care on the health of target groups through formal investigations.

For this employee group the clinic subcommittee members envisaged a number of services: blood pressure; visual and auditory screening; health history-taking; health assessments and referrals; individual counselling to complement currently prescribed medical treatments; and group counselling for clients with common problems (e.g. hypertension, diabetes and obesity).

Employees of the university were the first target group to be assessed but local pre-schoolers soon became a second focus. An emphasis on dealing with young families in the clinic was consistent with the Primary Health

Nursing course and with the third year objectives. Students in community nursing had been providing prenatal and parenting classes for young families, as well as first aid and child development classes for daycare workers. At that time, school nursing and screening services were being provided by the Department of Health nurses but there were no local nursing or other community programs for early identification of sensory disorders or developmental lags in pre-schoolers. A learning centre was in existence for pupils of the local school district. After discussion and literature review, three- to six-year-old children in our community were targeted for nursing services and the establishment of a "developmental and sensory screening service" was proposed.

### *Clinic implementation*

Funding was received from the Maritime Provinces Higher Education Commission in Summer, 1978. A small four-room suite in the nursing building became the UNB Screening Clinic. Some of the necessary planning was delegated to the first students during four-day rotations that fall. At that time, both basic and post-R.N. students were registered in some nursing courses within the curriculum. The post-R.N. students' working experience helped to stabilize the clinic during this planning phase.

There were three objectives of the clinic for the first UNB Screening Clinic rotations.

1. To engage third year basic and post-R.N. students in actual community health planning, (i.e. the creation of their own clinics).
2. To learn and demonstrate specific screening skills useful to primary health nurses.
3. To offer a preventive health service to selected target groups, (i.e. university faculty/staff and local pre-schoolers).

In the Fall, 1978, students, in serial groups of six and with faculty direction and support, continued the review of literature, the assessment of possible target groups, the search for screening equipment and resource materials for client teaching and the planning of publicity. They reviewed blood pressure techniques and fitness testing and were taught vision and hearing screening procedures. As well, using numerous sample charts and their knowledge of pertinent history, they devised the recording forms for the first adult clinics.

Development of the screening protocols for the UNB Screening Clinic was undertaken with the advice of local resource persons and agencies. For example, the Canadian Red Cross had a useful manual which gave detailed directions for setting up fitness appraisal clinics. The capabilities of pre-

schoolers, the projected skill level of the students and the reputed reliability and validity of the screening tests were important considerations. The Screening Clinic rotation allowed the students to improve their problem-solving skills. Problems, such as how to retain the attention of a four-year-old, how to set up the screening environment, or what order of screening tests to use, arose from the discussions and practice sessions.

By late 1978, vision, hearing and hypertension screening protocols were ready for further testing, and in order to put them into practice along with pre-arranged referral channels, the first "real" clinics were advertised.

In January, 1979, all administrators and department heads at UNB received announcements of the first adult hypertension clinics that explained the screening and health counselling service, asked them to inform their staffs and asked them to encourage attendance. As a result of this and of efforts during the preceding term, two hundred employees appeared at the three scheduled day-long clinics. A number of health-related concerns such as weight problems, smoking and inactivity, were discussed. These concerns were noted and incorporated into the on-going target group assessment. Referrals to family doctors, involving mostly re-tests of elevated blood pressures and medication problems, were well received by clients and professionals.

Contact between a faculty member and a parent cooperative nursery school yielded the first pre-school clients. Parental consents were obtained. In that winter term (January-April, 1979) vision and hearing screenings were provided for approximately 40 three- to six-year-old children. A few referrals to ophthalmologists, optometrists, family doctors and audiologists were necessary.

The weighted value of the four-day Screening Clinic component in Primary Health Nursing, N3160, a year-long course, was only 10% for students in 1978-79. Overall, the clinical grade amounted to 50% of the course total.

### **Current Clinic Services**

The UNB Screening Clinic has maintained its original objective of providing an employee health service. This objective is presently fulfilled primarily by the senior students. In Fall, 1979, fourth year students began to provide comprehensive adult health assessments in their clinical rotation, while third year continued with monthly hypertension clinics. The latter service was opened to the general public and attracted many seniors as regular attendees. Parking facilities on campus became a problem and, as such, adult clinics then began to be held off campus, once per rotation, and

client numbers were maintained. This was important because student numbers were also rising. To become better known off campus, the Screening Clinic is now regularly held at two unchanging central locations.

At present adult protocol includes a health interview, height, weight, and blood pressure testing, a medication review and health counselling. Currently, adult clinics attract 60-80 clients on a given day. These clinics operate on a drop-in basis. Local media keep the public informed.

Pre-school services for three- to six-year-olds now include the Denver Developmental Screening Test (DDST), height, weight, blood pressure, hearing, speech and vision screenings. Only the DDST is performed for children from birth to three years. The screening tests, in conjunction with health history, health teaching and parent counselling, provide a comprehensive preventive service.

Students are assigned to the rotation in groups of 10 to 12. The Screening Clinic can accommodate up to 30 children per clinic day. Requests for pre-school screening at local kindergartens and day care centres are accepted, if adequate facilities can be located, and if faculty, students and proper equipment are available. The settings provide realism, planning opportunities and practice in improvisation for students.

Referrals form a vital link from any primary health service to on-going professional health care. Whenever necessary, adult clients are referred to their family doctors, other professionals or community agencies. In normal circumstances the referral policy is to inform the clients, give the clients a written referral, and advise them to contact their doctors independently.

For pre-schoolers, full clinic results are sent, in writing to the referral service in order to provide a picture of overall development. It may refer directly to the ear-nose-throat specialist or the ophthalmologist, for example. Written feedback, routinely requested from referral services, is carefully noted and filed. The strength of all protocols is measured by the reported accuracy of referrals. Any feedback regarding referrals is shared with the student and supervising faculty members who attempt to keep in contact with the ENT specialists, ophthalmologists, optometrists, audiologists, speech pathologists, and physicians to whom referrals go, to keep the communication channels open and to learn of changes in their fields that may have screening implications.

### **Teaching Primary Health Nursing Skills**

Coincident with the development of the services of the UNB Screening Clinic, the faculty was also formulating educational goals and strategies



(Flynn, 1984). It was important to integrate the Screening Clinic objectives more closely with the overall third year clinical objectives. However, because of newness and uniqueness of the setting and the tasks involved, specific, separate objectives seemed necessary. A few of the earliest objectives for student learning were:

1. to plan, implement and evaluate a small clinic or clinics as part of a team;
2. to administer the Fit-Kit (CHFT), interpreting findings and counselling;
3. to interpret the findings of vision screening tests and discuss the need for referral or retesting; and
4. to demonstrate proper administration and explanation of hearing screening tests with adults and children.

Specific objectives were invaluable, as well, in the orientation of new faculty members. In 1979 a second full-time community faculty member for the third year program was hired and a third joined the team in 1980. Only one of the part-time faculty members has remained. Faculty members became proficient in a particular area of screening and are not easily replaced when they leave. Orientation time is high in order to ensure that the standards of the clinic are maintained.

Screening Clinic services and, indirectly, expectations for student performance, have been reviewed. Currently all students come to Screening Clinic in groups of 10-12 as a regular eight-day rotation in the third year program. Table 1 outlines the activities. Pre-school screening skills are demonstrated; students practise and then return the demonstration. Each teaching day (Day 1, 2 & 6) is followed by independent practice. By the end of Day 5 students are expected to perform all pre-school procedures competently and to participate fully with faculty in the interpretation of screening results as well as in writing of referrals. They are expected to do some planned teaching, to counsel as opportunities present, and to collaborate in a professional, confident manner with clients and faculty. History, observations and rationale are discussed thoroughly before decisions are made. Feedback to parents is then the responsibility of the students.

Faculty attempt to arrange for each student to screen two or three children per pre-school clinic day. Feedback from faculty is given in both verbal and written form. Post-conferences are held to share learnings, provide re-direction, and boost morale. At these conferences student suggestions help solve current problems such as late cancellation of appointments, or safety for children in the waiting area. They are expected to be aware of overall clinic organization and communicate any difficulties to ensure smooth operation.



Table 1

*Screening Clinic Rotation Third Year*

Times	Activities	Staffing (10-12 students)
Day 1 (Tues.) 8:30 - 4:30	Introduction to Screening Clinic. - philosophy, objectives, expectations, tour. Denver Developmental Screening Test. - demonstration, discussion and practice. Hearing and speech screening - lecture, discussion, demonstration and practice.	Faculty A  Faculty A Faculty B
Interim	- independent practice.	
Day 2 (Thurs.) 8:30 - 4:30	Vision screening. - lecture, discussion, demonstration and practice.	Faculty C
Interim	- independent practice.	
Day 3 (Tues.) 8:30 - 4:30	Pre-school clinic. * - on-site and/or day care setting.	Several faculty (as needed)
Day 4 (Thurs.) 3:30 - 4:30	Pre-school clinic.	Several faculty (With a short counselling ( practice session on ( day 4 or 5
Day 5 (Tues.) 8:30 - 4:30	Pre-school clinic.	Several faculty
Day 6 (Thurs.)	Adult screening. - review of protocols, lifestyle counselling, student presentations, demonstration and practice of techniques and roles.	Faculty D, E
Interim	- Independent practice.	
Day 7 (Tues.) 8:30 - 5:30	Adult clinic. * - seniors' centre or church hall.	2-3 faculty (as needed)
Day 8 (Thurs.) 8:30 - 5:00	Adult Clinic. * - occupational health, government offices or shopping mall	2-3 faculty (as needed)

\* Several post-conferences are included

Students state that screening in primary health nursing is an exciting new role. Some also state that they feel pressured to perform well. Because the Screening Clinic provides a public service and makes professional referrals, careful direct supervision is provided by faculty for the initial screenings and charts are thoroughly reviewed. These close supervision efforts provoke anxiety in students. Working with the same faculty member on several days reduces this anxiety, but can, in turn, cause scheduling problems.

In 1985-86, for the first time, all students attended a half-day counselling practice session. Here they discussed situations that they had encountered or anticipated in Screening Clinic. Taking the roles of client and nurse, they used Gazda, Walters and Childers's (1975) framework with such varied components as empathy, respect, confronting or immediacy, to improve counselling skills. Videotaping and playback increased self-awareness.

The counselling innovation within the rotation illustrates the way in which the Screening Clinic has merged its objectives with the third year curriculum. The opportunities for health counselling practice, family visiting, group work and work in all other clinical settings are being well used. The danger of focusing too much on new technical skills in the Screening Clinic, to the detriment of the teaching and counselling roles, has been confronted with success. A balanced approach is important to maximize student learning at the third year level.

Day 6, outlined in Table 1, consists of a review of the adult clinic protocol, followed by student presentations on selected adult health topics and a review of blood pressure techniques and fitness testing. Presentation topics range from pathophysiology of hypertension to life-style counselling issues such as fitness and smoking. Hypothetical client situations lead to useful discussion. The discussion builds on previous knowledge and clinical experiences and is directed at primary care needs and primary health nursing roles.

On Days 7 & 8 adult clinics are held: one for senior citizens, the other for health workers in shopping malls, government offices or other occupational settings. Faculty anticipate a minimum of 5-6 clients per student, per day. The open set-up of the clinic enables faculty to observe from a short distance, and this allows students to function more independently. Students perform basic health teaching regarding nutrition, hypertension, lifestyle and medication. They report findings and referrals to faculty verbally and by charting. If possible, faculty accompany each student during a couple of interviews to assess the use of screening procedures, as well as the depth, accuracy and appropriateness of nursing assessment, teaching and counselling.

Screening Clinic now constitutes fifty percent of a third year six-credit-hour course. The clinical objectives have changed substantially since the clinic began in 1978. In 1986-87, for the first time, the Screening Clinic will use evaluation objectives identical to those for all third year clinical courses. Faculty are planning a ten-day experience (i.e. two extra days) to help students achieve a greater degree of confidence and competence in pre-school screening. They will also experiment with formal group health teaching sessions at adult clinics, in lieu of a student presentation to peers. A longer-range plan involves videotaping the teaching presentations that are usually given live on Days 1 & 2. The latter plan requires funding.

Change seems to be the only constant factor in the UNB Screening Clinic. Ideas received from regular post-conferences, feedback from faculty and periodic student and consumer surveys have all helped in the evolution of educational and service objectives that are in pace with the Faculty's overall resources and growth.

### **Discussion**

To an onlooker the UNB Screening Clinic may seem to have evolved without direction, but, in fact, the changing needs of the local community, the expertise brought by faculty members, the tremendous capability and adaptability of the students and the expanding enrolment have been the major influences on development.

#### ***Benefits for faculty***

For a nursing faculty, having an independent facility for student clinical practice is an attractive possibility. In the case under discussion it allows great flexibility to experiment with primary health nursing roles. Faculty face a new challenge every day! They develop expertise in a given area of screening; they participate in current program planning and ongoing evaluation. All carry a heavy workload and experience pressures of high student-to-faculty ratios, many clients, much evaluation writing and a high amount of student contact time. However, the UNB Screening Clinic is becoming better known and recently faculty have been asked to give vision and developmental screening workshops for Public Health Nurses in the Province. The Clinic has encouraged sabbatical projects (Wiggins, 1982) and some graduate-level course work of part-time faculty.

#### ***Benefits for students***

Students benefit by learning specific skills for their future practice. They work to achieve the third year curriculum goals; they experience teamwork

through clinic planning and referrals; and they learn the importance of emphasizing family-centred practice in primary care.

### *Benefits for clients*

Clients seek and find health-related information with regard to self-care. Nursing referrals are made and some concerns are allayed. Social interactions occur. Newcomers to our city often make their initial contact with the local health system at the Screening Clinic. Returning clients take pride in the evidence of health maintenance that their "yellow cards" represent.

During eight years of operation the UNB Screening Clinic has established itself as a respected primary care facility and clinical resource in the city and local area. However, there have been many obstacles. Faculty turnover, and scarcity of space, time and money have all been dealt with.

Unfortunately however, as the Screening Clinic became accepted by faculty, students and the community as a viable clinical field and health resource, the clinical teachers who were directly involved adjusted their working priorities from those that were originally defined. In view of scarce resources and various uncertainties, they reverted to the more comfortable roles of teachers, and formal research efforts were deferred. The faculty workloads increased and plans for a Clinic Coordinator and secretarial assistance have not as yet, been realized. Faculty members have been obliged to direct day-to-day clinic operation. When these problems are overcome and a more stable clinic structure is attained, the original third clinic objective, related to formal research, must re-emerge.

Our recent experiences in the Screening Clinic suggest many relevant research questions. The first priority, an evaluation study of clinic outcomes, was initiated in the Fall, 1986. Another proposal, now at the draft stage, will compare the predictive strength of the Denver Developmental Screening Test with that of a more recently developed assessment tool, the Diagnostic Inventory for Screening Children (Amdur & Mainland, 1985). Middle ear problems in children and appropriate nursing intervention interest another faculty member. The University of New Brunswick's unique pre-school vision protocol for nurse screening will be tested further and documented in the literature. Research to demonstrate levels of client satisfaction with primary health care by nursing students and faculty could augment the primary health literature and may suggest nursing roles with regard to the Canada Health Act. As nursing faculty members change their own objectives, demanding increased time for research, the Screening Clinic will be able to achieve its three goals: education, community service and research.

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## RÉSUMÉ

### **Enseignement des soins infirmiers de base de première ligne aux consultations externes de dépistage de l'Université du Nouveau Brunswick**

Les consultations externes de dépistage de l'Université du Nouveau Brunswick constituent un milieu clinique innovateur où les étudiants de sciences infirmières se préparent à dispenser des soins d'hygiène communautaire. L'auteur décrit l'évolution des consultations externes, et notamment certains des défis que les professeurs ont dû relever à l'étape de la planification et de la mise en oeuvre. Les services actuellement offerts comprennent le dépistage, l'éducation et le counselling en matière d'hygiène, et s'adressent aux adultes et aux enfants d'âge pré-scolaire. Les objectifs des consultations externes, la participation des étudiants et des professeurs ainsi que les méthodes d'enseignement sont également décrits. Les consultations externes de dépistage de l'Université du Nouveau Brunswick jouent un rôle double dans l'éducation et la présentation des services communautaires. Elles servent également de point central pour la recherche réalisée par les professeurs.

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