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NURSING PAPERS PERSPECTIVES EN NURSING

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EDITORIAL

Protecting Our Human Research Resources

Research is still a recent, developing activity in nursing science and our human research resources are scarce. In Canada today, there are approximately 150 nurses with research preparation at the doctoral level and about 50 others currently studying toward a Ph.D. (these numbers are approximate as the latest statistics are not yet published). These 150 research-trained people are spread across a vast country, 26 university schools of nursing, countless large teaching hospitals and several community-based services. If all of these researchers held academic appointments (and they do not), and if they were evenly distributed across academic settings (and they are not), we might achieve an average of 5.77 research-prepared faculty members per university. This hardly represents a critical mass for the growth of the discipline. Unfortunately, the geographic spread and work setting diversions serve to weaken further an already frail resource. Research does not occur in a vacuum and form a strong foundation of peer review and collaboration in order to develop and, indeed, remain productive.

What structure or organization do we have at a national level to encourage and protect research and our researchers? What type of structure would ensure coordination and strengthening of this critical group? Evidence that such a structure is needed is the fact that several of my research colleagues have recently formed a nursing research interest group. The name itself reflects the infant status of the enterprise. If research is considered to be only an interest, we may be in serious trouble. Separating research out as an isolated activity goes against the tenets of science and may be a dangerous precedent for the future of nursing. Research is an integral part of the developing science of nursing. It is the scientific approach to the development of knowledge upon which the practice of nursing is based. The development of knowledge and the dissemination of that knowledge constitute the business of institutes of higher learning. That is, research is an academic pursuit and, in the case of nursing, must have both feet firmly planted in the clinical and professional reality of our discipline.

This being so, I would argue that the most logical national organization to foster the cause of research is the Canadian Association of University Schools of Nursing (CAUSN), the mission of which is to represent and promote the academic base of nursing. It is true that CAUSN may require a radical organizational change in order to meet the present and the 21st century needs of nurse educators and researchers. It is my belief that we should participate

in and support structural and program changes under the auspices of CAUSN. We are too few to support more than one national organization the principal mandate of which includes the fostering of research in general. We already participate in more specialized national and international organizations related to our particular substantive areas of expertise.

Time and money are critical to research productivity. Let us not duplicate efforts, scientific meetings, scholarly journals, political lobbying, fund raising and so forth. Let us not divide or spread our research resources this would only serve to weaken further the research potential of Canadian nurses and may even seriously retard our progress in the development of knowledge. Let us unite and make wise long-range plans for a strong future of research, rather than expedient decisions for the problems of this moment.

Our human research resources are few, albeit developing in number and strength. They are however, an important investment for the future of nursing. Let us protect these resources. One way to ensure this is to have a strong national representation and an organization whose *raison d'être* is to promote the academic base of our discipline. Discussion of or responses to this editorial will be published as letters to the Editor.

Mary Ellen Jeans

ÉDITORIAL

La protection de nos ressources humaines en recherche.

En sciences infirmières, la recherche est une activité relativement récente et les ressources humaines dans ce secteur sont rares. Au Canada, à l'heure actuelle, quelque 150 infirmières ont été formées à l'obtention d'un grade de troisième cycle (ces chiffres sont approximatifs, les dernières statistiques n'ayant pas encore été publiées). Ces quelque 150 personnes formées en recherche sont réparties à travers un vaste pays, 26 facultés de sciences infirmières, un nombre incalculable d'hôpitaux d'enseignement et plusieurs centres de services communautaires. Si tous ces chercheurs occupaient un poste en milieu universitaire (et ce n'est pas le cas), et s'ils étaient répartis également entre les différentes universités (ce qui n'est pas le cas), nous obtiendrions une moyenne de 5,77 professeurs formés à la recherche par université. Nous sommes loin de la masse critique requise pour la croissance d'une discipline. Malheureusement, la dispersion des chercheurs et la diversité des milieux de travail contribuent à affaiblir des ressources déjà fragmentaires. Pour reprendre une observation célèbre, disons que la recherche, tout comme

la nature, a horreur du vide et les chercheurs ne réussissent pas dans l'isolement. Ils ont besoin de se regrouper pour mettre en place une infrastructure solide permettant l'évaluation confraternelle et la collaboration sans lesquelles il est impossible de se développer et par là, de réussir.

De quelle structure ou organisme disposons-nous à l'échelle nationale pour favoriser et protéger les travaux de nos chercheurs? Quel type de structure permettrait la coordination et le renforcement de cette masse critique? La nécessité de mettre en place une telle structure est manifeste; en effet, plusieurs de mes collègues en recherche ont récemment constitué un groupe qui s'intéresse à la recherche en sciences infirmières. Le nom qu'ils se sont donnés reflète le stade primaire de l'entreprise. Si la recherche ne représente qu'un intérêt, il est possible que nous soyons en difficulté. La séparation de la recherche en une activité isolée va à l'encontre des fondements de la science et peut constituer un précédent dangereux pour l'avenir des sciences infirmières. C'est la démarche scientifique vers l'acquisition de connaissances sur lesquelles l'exercice de la profession est fondé. Le développement et la diffusion des connaissances sont l'objet des établissements d'enseignement supérieur. La recherche est donc une activité universitaire qui, dans le cas des sciences infirmières, doit être solidement ancrée dans la réalité clinique et professionnelle de la discipline.

Ceci dit, l'organisme national le plus apte, à mon avis, à favoriser la cause de la recherche est l'Association canadienne des écoles universitaires de nursing (ACEUN) qui a pour mission de représenter et de promouvoir les fondements universitaires des sciences infirmières et des chercheurs, tant actuellement qu'au XXI^e siècle. Je crois que nous devons participer aux modifications structurelles et aux modifications du programme sous les auspices de l'ACEUN et que nous devons les appuyer. Nous sommes trop peu nombreux pour appuyer plus d'un organisme national dont le mandat principal serait de favoriser la recherche en général. Nous participons d'ores et déjà à des organismes nationaux et internationaux plus spécialisés qui ont trait à nos principaux domaines de compétence.

Le temps et l'argent sont deux coordonnées critiques de la productivité en recherche. Evitons de doubler nos efforts, nos colloques scientifiques et nos revues savantes, notre action politique, nos levées de fonds, etc. Evitons de diviser ou de disperser nos ressources de recherche, ce qui ne servirait qu'à affaiblir d'autant le potentiel de recherche des infirmières et des infirmiers canadiens et par le fait même à retarder sérieusement notre progression vers l'acquisition des connaissances. Unissons-nous et formulons de sages plans à long terme en vue de donner à la recherche un avenir solide, plutôt que de nous livrer à des décisions expéditives touchant les problèmes du moment.

Nos ressources humaines en recherche sont réduites, quoiqu'elles se développent en nombre et en qualité. Elles sont toutefois un important investissement pour l'avenir des sciences infirmières. Protégeons donc ces ressources. Pour y arriver, nous devons avoir une représentation nationale et un organisme dont la raison d'être est de favoriser les fondements universitaires de notre discipline. Des avis sur cette question ou des réactions à cet éditorial seront publiés sous la rubrique Lettres à la rédaction.

M.E. Jeans, N., Ph.D.

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LETTER TO THE EDITOR

A Response to "Nursing Theory: What it is and what it is not"

Evelyn Adam's article "Nursing Theory: What it is and What it is not" (1987) provides an excellent opportunity for nurses in Canada to enter into the kind of discussion and debate that nursing theory, a philosophical issue, requires.

What has become evident is that after some 15 years of finding nursing theory presented in the literature, there is still a great deal of confusion surrounding the topic. The relationship of nursing theory to client care has not been made, instead, as in Evelyn Adam's article, nursing theory is linked to "nursing's legitimate desire to be recognized as a full fledged member of the scientific community..." This is the primary motivation for the development of nursing theory - to give us an identity of some kind. The author does go on to refer to contributing to knowledge and to acquire knowledge which is essential to practice (which she feels is the "most important but less often recognized" reason for the interest in Nursing Theory). It is this last part which should be of concern.

Have we, as nurses, identified that level or kind of theory which is essential to practice? The author described clearly the categories of theory, that is, whether or not they describe, explain or predict. What is not explored is the levelling of theory which Chinn and Jacobs (1983) have presented as a continuum which ranges from the micro level (few variables to measure) to the midrange (more variables to measure, complexity increases) to the macro level which "conceptualizes goals very broadly...(and)...deals with the whole of nursing's concern" (p. 124) (extremely complex with multiple variables, probably impossible to measure). Evelyn Adam follows most other writers on theory when she assumes that the macro level of theory is the most important and the most useful. This is why she presents the macro theories of Johnson and Henderson. Silva (1986) found that of 62 located empirical studies testing macro theories only nine could be said to have had "adequate use and testing" of the macro theory and even then, she proposed that the research may have tested only part of the theory. If this is correct, the theory tested was probably at the micro or midrange levels.

A knowledge base in nursing is made up mostly of micro and midrange theories. A macro theory may be used to organize micro or midrange theories in a particular manner and thus, would become part of a knowledge base.

Leslie K. Hardy, R.N., Ph.D. is Professor and Director, in the School of Nursing, at Memorial University of Newfoundland in St. John's.

Perhaps if writers on theory identified the level of theory every time they wrote the words "nursing theory", some of the illogical claims and the semantic confusion may be alleviated. For instance, if one is referring to micro nursing theory such as the physiological responses in therapeutic touch procedures, one would not be waxing eloquently on how this defines nursing.

The author deals well with the semantic confusion over models, conceptual frameworks, and nursing theories. This is an area in which healthy debate should continue for some time. What is not explored since the purpose of the article is to be definitive about what nursing theory is or is not, is the critical literature on nursing macro theory. To illustrate, here are some of the questions I have found in an extensive review of the literature:

- 1) Green (1985) noted that many macro theories cannot be used for the separate functions in which nurses are engaged - for example, nursing administration or transcultural nursing.
- 2) Both Green (1985) and Webb (1986) have pointed out that quality of care has not been proven to be affected positively or negatively.
- 3) There has been the question posed by Craig (1986) that macro theories which supposedly direct one's practice in total, are 'prescription for unintelligence'. Craig felt that most macro theories are in conflict with the "construction of our cognitive apparatus". That is, short term memory processes only a small amount of information at one time, but macro theories propose complete, holistic, assessments. Siegel (1983) remarked that the use of one macro nursing theory in education would not
 "reconcile with higher education, adequate professional preparation
 or even common sense" (p. 17)
Freedom of expression and thought in nursing may be compromised by the adoption of one macro theory.
- 4) The development of nursing macro theories may be related more to professionalising than anything else (Gruending, 1985, Hardy, 1986).
- 5) Some authors are discovering that major health events cannot be accounted for in some macro theories. Hoon (1986) found that dying was mostly ignored.
- 6) Since all current macro nursing theories remain invalidated empirically what they do provide, a base of values, may be problematic.

Perhaps the overriding concern about the claims for macro nursing theories is that the client's view, opinion, model of living, approach to health problems is ignored because the adopted macro theory dictates the way the system will operate. Yet, consumerism in health care is growing and clients will soon be asking about how nursing care is organized and why. We have difficulty explaining macro theory to one another and to our students. Surely explana-

tions to the public (which should be expected since we serve them) will promote kafkaesque scenarios. One can imagine clients looking about while a nurse explains Roy's model of nursing and asking "Am I on Candid Camera?"

The development of macro theories and theorists in nursing is positive. What should be encouraged is full debate as befits philosophical issues in any discipline. What must be avoided is the adoption and operationalizing of nursing theories of any level - micro, midrange or macro - which remain unvalidated empirically and are therefore potentially dangerous to the outcome of client care.

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COPING WITH FEELINGS: CHRONICALLY ILL CHILDREN AND THEIR FAMILIES

Connie Canam

Coping with a child's chronic illness presents many challenges for parents. To cope effectively, there are a number of adaptive tasks that all parents must complete, regardless of what type of chronic illness their child has (Hymovich, 1976, 1979; Mailick, 1979; Moos & Tsu, 1977). According to a number of authors, one of the most important of these tasks is being able to communicate with others in the family about the illness, including explaining the illness to the child and the siblings and encouraging the expression of feelings about the illness (Burton, 1975; Kaplan, Smith, Grobstein & Fischman, 1973; Kliman, 1978; McCollum, 1975; Steinhauer, 1972). Yet, little research has been done in this area.

If nurses are to be effective in their role of helping families with chronically ill children to cope, they must have an understanding of the adaptive tasks that parents face and of the coping strategies they employ in completing these tasks. Brailey (1984) emphasizes that, in order to study the effectiveness of coping, we must be able to obtain an accurate picture of how people actually do cope with the stressful events of their lives.

The present study was conducted to explore the ways in which parents cope with the adaptive task of communicating about their child's chronic illness within the family. This paper describes the study and reports on findings related to the communication of feelings within the family. The study questions were:

1. How do parents communicate about their child's chronic illness within the family?
2. What guidance have they received in communicating about the illness within the family?

Theoretical Framework and Literature Review

The theory of coping that provided the framework for this study was that of Lazarus and his colleagues (Lazarus & Launier, 1978; Folkman & Lazarus, 1980). This theory states that coping is the cognitive and behavioural efforts

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made by individuals to deal with the internal and/or external demands of a situation with which they are confronted. These efforts serve two main functions: to manage or alter the situation (problem-focused coping) and to control the emotional reaction arising from the situation (emotion-focused coping). These functions are also recognized by other theorists (Mechanic, 1974; Murphy & Moriarty, 1976; Pearlin & Schooler, 1978). Coping is effective to the extent that individuals have the skills and motivation to manage or alter their situations, and are able to regulate their emotional responses so that their energies can be directed towards meeting the demands of the situation (Mechanic, 1974).

Many of the interventions directed towards helping individuals cope focus on the person's emotional response (emotion-focused coping) rather than on the skills needed to meet the demands of the situation (problem-focused coping) (Hiebert, 1983). This author argues that we should concentrate more on helping individuals to develop problem-focused skills rather than focusing on reducing their emotional response. This premise is based on the assumption that acquiring the specific skills needed to cope with a situation will mitigate the emotional responses.

To determine if the individual has the skills necessary to deal with a situation being confronted, the demands or adaptive tasks inherent in that situation must first be specified. For parents coping with a chronically ill child, several tasks have been delineated in the literature, one of which is communicating about the illness within the family (Hymovich, 1976, 1979; Mailick, 1979; Moos & Tsu, 1977). The ways in which families carry out these tasks are known as their coping strategies or coping skills (Moos & Tsu, 1977). The coping strategies they choose will influence the effectiveness of their coping (Holaday, 1984).

While there have been a number of studies on how families cope with a child's chronic illness, few have focused on the adaptive task of communication about the illness within the family. Those who have examined family communication as part of larger studies report that the majority of parents give little or no information to the ill child or to the siblings about the illness and/or rarely discuss or encourage the expression of feelings about the illness (Burton, 1975; Canam, 1986; McCollum & Gibson, 1970; Tropauer, Franz & Dilgard, 1970). The most frequent reasons given by parents for not talking about the illness were their desire not to harm the child (Burton, 1975; Tropauer, Franz & Dilgard, 1970) or their perceived inability to answer questions about the child's prognosis (Burton, 1975; Canam, 1986; McCollum & Gibson, 1970). The major focus of most of these studies was family coping, of which family communication was one aspect, and therefore detailed descriptions on how parents communicate were not collected.

The study being reported here used an exploratory research design in order to provide a detailed description of how parents of children with a chronic illness communicate within the family about the child's illness.

Methods

Sampling procedures

A convenience sample of fifty-seven parents of chronically ill children was selected from two ambulatory clinics of a large urban hospital. The definition of chronic illness utilized in this study is from the work of Pless and Pinkerton: a physical, usually non-fatal, condition which lasts longer than three months in a given year or necessitates a period of continuous hospitalization of more than one month (1975, p. 90).

The criteria for eligibility were: the child with a chronic illness had been diagnosed for at least one year, was three years of age or older and had no major handicaps; there were siblings living at home who were three years of age or older; and the parents has a good command of the English language.

The first forty families to meet these criteria were approached by the investigator and the purpose of the study was explained to them. They were assured of confidentiality and their right to withdraw from the study at any time without jeopardizing their child's treatment. If they agreed to participate, arrangements were made to interview them and a letter of consent was signed before the interview began.

Description of subjects

Twenty-four families of children with epilepsy and 12 families of children with cystic fibrosis participated in the study. These included 23 mothers and 20 fathers of children with epilepsy, and 11 mothers and three fathers of children with cystic fibrosis; a total of 34 mothers and 23 fathers. Four of the families consisted of single parents; the remaining 32 were two-parent families.

The age range of the children with chronic illnesses was from four and a half years to sixteen years, the mean age being ten years. The average length of time since diagnosis was three years with a range of one to ten years. The number of siblings ranged from one to five and their ages ranged from three to twenty-one years.

Data collection

Data were collected by the guided interview technique. This technique is utilized when more information is required about a topic. It ensures that all the

information required will be obtained while allowing the informant freedom of responses and description (Field & Morse, 1985).

An interview schedule was developed by the researcher that was based on the literature review. The first section of the interview focused on communication of information; it included questions on the parents' knowledge of the illness and what information they gave their ill child and their well children. The second section focused on the communication of feelings; it included questions on the feelings that parents and their children experienced in relation to the illness and how these feelings were communicated. A third section of the interview schedule focused on the guidance parents received in communicating about the illness within the family.

The interview schedule was examined by a panel of three experts in the field of chronic childhood illness, revisions were made as suggested and the schedule was then pretested with three eligible families. Minor adjustments were made and the schedule was then used with each family.

In families where both parents volunteered to be interviewed, they were interviewed together, with either one or both parents responding to the questions asked. Each interview was taped, the tape recordings were transcribed verbatim and the transcriptions were used in the analysis. The interviews ranged from 60 to 90 minutes, with the majority taking approximately one hour. Sixteen of the interviews were conducted in a private office at the clinic and 20 were conducted at the homes of the families interviewed.

Data analysis

The transcribed data were analyzed by manifest and latent content analysis (Field & Morse, 1985). The interview schedule was set up to collect the data within three major sections (communication of information, communication of feelings and guidance received in communicating about the illness), and, as such, each section was analyzed separately. The data were examined, line by line, for similar comments, words or phrases used by the participants and a system of colour coding was developed to group like responses together. In interviews where both the father and mother participated, their comments were examined and coded separately.

Like responses were then organized into categories and the theme that dominated each category was defined by identifying the appropriate concept labels. The concepts were stated as simply as possible and often in terms the subjects had used themselves. Such terms as worry, upset and panic were grouped together and defined as fear. Once the categories were identified, responses were tabulated and descriptive statistics were applied.

Findings

The findings reported in this paper focus on the communication of feelings within the family. They include the feelings experienced by parents and their children in relation to living with a chronic illness, how those feelings are communicated within the family and the guidance parents received in helping them communicate about feelings.

Parents' feelings

All parents were able to identify feelings they experienced in relation to living with their child's chronic illness. The most frequent feeling expressed by parents was fear. Seventy-two percent of the participants mentioned the word fear, worry, upset, desperate, terror or panic when describing their feelings about their child's illness.

These feelings seemed to move along a continuum from worry to panic depending on the child's condition and the parents' perceptions of how much control they had over it. Parents admitted to constant worry even when the child was well: "Every time the phone rings at work I wonder if it's for me," but this worry escalated when the child became sick: "every time she gets sick I think, 'is this it?' and I can feel the panic rising in me." Parents also expressed worry and fear when they didn't have enough information or understanding of their child's illness:

Not knowing... we imagined all kinds of weird and wonderful things that were a lot more serious.... If we had the information, there would have been no problem.

Two other feelings commonly expressed by parents of children with epilepsy were frustration and confusion. Sixty-four percent of parents said they frequently felt frustrated and gave a number of reasons for this: waiting for long periods to see specialists; lack of seizure control in the child; the child experiencing side effect from the medications; and difficulty in trying to get their child to take the medications. One parent graphically described the frustration of trying to give her child his medication:

I was so frustrated with him. He'd gag and throw it up and we'd get mad and give him some more... it got into a real vicious circle. I basically, bodily had to hold this kid down and get it in and shut his mouth and say 'don't you dare throw it up' - and he would! I thought 'you little so and so, you're doing that on purpose'. I finally went to the doctor and said 'will you please get him off the liquid and give him capsules.'

Fifty-five percent of parents felt confused about the source of their child's behaviour change or declining school performance. They did not know how much of the behaviour was because of the seizures or the medication and how much was just the child trying to get away with something. This presented a real dilemma for these parents, and they were constantly weighing the best approach to use in dealing with their child's behaviour.

Parents' communication about their feelings

Over half of the parents in this study (56%) said they did not talk about their feelings with anyone; the most frequent reason given was that they felt that no one wanted to listen to their concerns.

There were people who didn't want to listen. I think some of our friends purposely stayed away because they didn't want to listen.

My husband's family won't talk about it. In fact part of their family don't even realize B. is sick.

The doctors seem fairly rushed... They don't spend enough time with you to find out if you do have any anxieties about things.

Forty-four percent of parents did communicate about their feelings and concerns by finding people whom they perceived as receptive and understanding of their situation. The following quotes illustrate the importance of these qualities to parents:

I think that the easy access when you have doubts or anything built up to the point where it really bothers you, you could phone and talk to her (the nurse) and get your fears and anxieties set aside. She's so calm about it all and so helpful. You don't really get that with the doctors. They are more into diagnosing and statistics and facts rather than emotions and how you feel and how things should be handled.

She [the psychiatrist] was really easy to talk to and she had time just for taking through what your concerns were - what you've been harbouring in your heart... because your doctor doesn't have time to listen to those concerns.

I talk to other parents when I come to the clinic.... It's nice to talk to someone else who is going through the same thing because among our friends, no one else is. Knowing that other mom's were also not sleeping at night helped me.

Parents identified the nurse in the ambulatory clinic and other parents of children with the same health condition as the most helpful sources of support for talking about their feelings and concerns.

Parents' perceptions of the ill child's feelings

Parents were asked if they thought their ill child had any feelings about having a chronic illness. Seventy-four percent of parents identified feelings they thought their ill child was experiencing. The feelings most commonly reported were worry, depression, frustration and embarrassment. Although the children rarely expressed these feelings verbally, parents identified them from their behaviour:

I really think her (13 years) subconscious resentment is coming up in that she's forgotten to take her pills a few times recently.

He (12 years) wouldn't carry his own pills because they rattle in his pocket. If we ate out I had to pass the pills under the table because he didn't want anyone to see him taking them.

She (10 years) didn't have too many friends... she wasn't inviting them over. She wanted to be on her own most of the time. But she doesn't talk about it. She keeps her worry inside.

Thirty-six percent of parents made the comment that their child keeps their worries to themselves.

Communication with the ill child about feelings

Although parents were readily able to identify their child's feelings, 81% said they did not talk to their children about their feelings. There appear to be two major reasons for this. One reason is that it did not seem to occur to parents to talk to their child about his or her feelings. Forty-four percent of the parents made comments that showed an awareness of the child's feelings, with no indication of a need to explore these:

I'm sure he's worried. He (7 years) often comes down two or three times after we've put him to bed but the subject of epilepsy has never come up in that discussion. It's always been monsters or people with guns or something scary.

When asked if she ever asked him if he is worried, the parent said, "No, we don't promote it." This same parent said the teacher had called them two or three times to come and get the child because he had locked himself in the bathroom at school and would not come out.

The following comments from other parents indicate their lack of awareness of the need to explore the child's feelings.

These questions you're asking we have, in a sense, already had inside ourselves but we don't know the answers. Like, is it bothering him or isn't it bothering him?

Parent: I think that he (10 years) is under a great deal of stress.

Nurse: How does he deal with it?

Parent: I don't really know.

Parent: I really think she (8 years) felt, at one point, a lot of despair. She scratched in a little notebook she had in great big bold letters, "*I hate epilepsy.*"

Nurse: Did you talk to her about it?

Parent: No, I didn't let on I saw it.

The other major reason for which parents did not talk to their children about their feelings was because they thought it would make the child feel worse. Thirty-eight percent of parents, when they recognized their children were upset, worried or frustrated tried to distract them or reassure them:

When she (12 years) looks down, I try to say or do something to shift her mind from it.

She (8 years) will say "I wish I didn't have this" and I'll say, "Well, really, you know, you don't have very big problems."

Some parents had actually tried to talk to their child but the child would not respond.

She (14 years) won't tell us anything. I don't know what's on her mind. We've never been able to figure it out.

Other parents felt they had made the situation worse by attempting to talk to the child.

She (11 years) is so quiet... every time we try to talk to her she gets her back up and goes into a negative mood.... Why get her upset?

Another parent who had never talked to her eleven-year-old son about his chronic illness (cystic fibrosis) reported that, one evening as they were sitting watching TV, he suddenly jumped up and said, "I hate you for giving me this disease and I'm going to die next year," and then he ran out of the room. She went after him and said, "Why are you saying that? Where did you get that idea? but he refused to talk about it any further. This mother was very upset about how she had handled the situation and admitted that she didn't know how to deal with her son's feelings.

I'll ask him sometimes if something is wrong and he'll say "no". I won't say anything more... maybe because I can't cope with it myself. I can understand the anger. Someone has to be there for him to take his anger out on. That doesn't bother me. What bothers me is how do I answer him? I'm very terrified to open my mouth in that I might just send him off on another frenzy. I'm not a psychiatrist, I haven't had any training in what to say to someone, especially someone you love so much.

Nineteen percent of parents reported that they did talk to their children about their feelings. These parents reported that the common times for feelings to come up for the child were at bedtime, during the night if they woke up, when they were being teased by their peers or during treatments. In most instances, parents thought that simply acknowledging the child's feelings helped the child to feel better.

I tell her (14 years) I don't blame her for feeling frustrated and mad at having to have treatments all the time. Then she usually goes out and jumps out her frustrations on the trampoline.

Parents' perceptions of siblings' feelings

Parents were asked if they thought their well children had any feelings about living with a chronically ill brother or sister. Forty-five percent of the parents did identify feelings that their well children had in relation to living with a chronically ill brother or sister. The most common feelings identified were fear and jealousy. The two main sources of fear for the siblings were that they would get the same illness or that their brother or sister would die.

He came home one day very upset because one of the kids at school had told him his sister was going to die. He was only seven and he thought it was going to happen right then; that he would come home one day and she'd be gone.

When we left M. (7 years) at the hospital, S. (5 years) became very upset and said, "Mommy, is she coming back?" and I said, "Yes." She says, "But she has a disease and she's never coming back. She's going to die!" The children had watched the movie *National Velvet* and the horse had a disease and died and M. had a disease, therefore she was going to die. She'd obviously been thinking about this for some time. (M. had epilepsy).

Twenty-seven percent of the parents mentioned that siblings were resentful of the ill child when the illness interfered with previously made plans. One mother said that they learned very quickly not to commit themselves to taking the children somewhere; sometimes their child with the chronic illness would not be well enough to go, and then the other child would be disappointed and resentful because the outing was spoiled.

The majority of parents said their well children, like their ill child, rarely expressed their feelings directly; the feelings came out in more subtle ways. For example, parents reported that the siblings who feared their brother or sister might die were overprotective of the ill child.

Communication with the siblings about feelings

None of the parents talked openly to their well children about their feelings. The reasons for this seem to be the same as those for not talking to the ill child — it didn't occur to them or they didn't want to dwell on it because it might make the child feel worse.

If the children did express feelings openly, parents reassured them or tried to distract them onto something else. A few parents mentioned that they tried to spend time with their well child if he or she seemed to be getting upset. One mother said that when her ill child was hospitalized, she took her well child to the hospital with her so she could spend time with both of them.

Guidance received from health professionals

Parents were asked what guidance they had received for talking about their children's feelings with them. Ninety-one percent of parents said they had received no guidance. Of the parents who did receive guidance, this came from health professionals and was often general in nature (e.g. "be honest with your child"). Only one parent said she had received specific guidance and this had been very helpful to her.

T (14 years) has very angry moods sometimes. I remember one day in particular. He was so angry at everything. Nothing came out but frustration and anger for two or three days. I had been trying to reach him saying "what is making you so mad? Why are you acting like this?" Finally, I was just about desperate and the Cystic Fibrosis Newsletter came and there was an article in it, written by a nurse, on anger - how it affects the child and how it affects the parents. It told me everything I needed to know - that he was angry at his disease and maybe at his parents for giving it to him. I talked to him about that and you know, the anger just faded away. It was gone with that little talk and yet it had been so hard to find the key.

Discussion

The majority of parents in this study did not talk about their own feelings, nor did they encourage their ill child or their well children to talk about their feelings. Communicating about the illness within the family is an important adaptive task in coping with a child's chronic illness, as such, it is imperative to examine the reasons why parents are not accomplishing this task.

The parents in this study did not talk about their feelings because they perceived that no one wanted to listen. The majority said they would have liked to talk to someone; this was borne out by the ways in which they readily shared their feelings during the interviews. Some parents mentioned that the interview itself was therapeutic for them. It seems that parents have a need to talk and, when they are provided with an opportunity, they are able to share their feelings and concerns openly.

Many authors emphasize the fact that parents need an opportunity to talk about their own feelings before they can allow their children to talk about their feelings (Grossman, 1973; Kliman, 1978; Leiken & Hassakis, 1973; Steinhäuser, 1972). Therefore, it was expected that parents who had opportunities to talk about their own feelings would encourage their children to talk about theirs; however, this did not occur. While opportunities for parents to talk about their own feelings may be a necessary condition for talking to children about their feelings, it was not a sufficient one, in this study.

Other factors must be operating and it appears that one such factor is parents' lack of awareness of the need for children to be able to share their feelings openly. This lack of awareness is interesting, in light of the fact that most parents stressed their own need to share their feelings with someone. The other factor that seems to be influencing parents' lack of communication with their children is their perceived lack of ability to deal with the child's feelings in a helpful way. They believe they will or, in some instances, did make the child feel worse by trying to talk to them about their feelings.

Based on what these parents are saying, they seem to lack the necessary knowledge and skills to communicate effectively with their children about feelings. This supports Hiebert's (1983) premise that we need to focus more on teaching individuals the skills they need to cope with situations and less on their emotional response to the situation.

While the findings of this study cannot be generalized beyond the sample due to the self selection of participants, they do have implications for nursing practice. There is clearly a role for nurses in assessing how parents are communicating about feelings within the family and in providing them with support when they are not accomplishing this task. Nurses can provide parents with opportunities to discuss their own feelings and concerns and ensure that they have the knowledge and skills they need to help their children express their concerns. This could include providing parents with information about children's emotional and cognitive development and helping them to realize that their children will have a greater probability of coping effectively if they can talk openly about their feelings. It could also include helping parents develop the skills they need to talk about feelings with their children.

In summary, parents of chronically ill children must complete a number of adaptive tasks if they are to cope effectively with their child's illness. One of these tasks is communicating within the family about feelings related to the illness experience. Findings from this study demonstrate that the majority of parents do not talk about their own feelings or encourage their ill child or their well children to talk about their feelings. The reason for this lack of communication appears to be that parents lack the necessary knowledge and skills to communicate effectively with their children about their feelings. These findings point to the important role that nurses play in supporting parents of chronically ill children to manage their own feelings and in teaching them to help their children manage their feelings.

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RÉSUMÉ

Savoir faire face à ses émotions: les enfants atteints de maladie chronique et leurs familles.

Les services infirmiers ont un rôle important à jouer à l'appui des familles qui doivent faire face à la maladie chronique de leur enfant. Pour remplir efficacement leur rôle, les infirmiers doivent non seulement comprendre les tâches d'adaptation des familles mais également les mécanismes d'adaptation qu'elles emploient pour mener à bien ces tâches. Cette étude exploratrice visait à étudier les stratégies d'adaptation qu'utilisent les parents pour accomplir une de ces tâches, la communication au sujet de la maladie au sein de la famille. Faisant appel à une technique d'entrevue dirigée, 57 parents d'enfants atteints d'épilepsie ou de fibrose kystique ont été interviewés et on a utilisé l'analyse de contenu pour étudier les données. La présente communication décrit l'étude et les rapports sur les observations liées à la communication des sentiments au sein de la famille. Les observations démontrent que la majorité des parents ne parlent pas de leurs propres sentiments ni encouragent leurs enfants à parler des leurs. Cette étude fournit une orientation très nette aux infirmiers, leur indiquant comment ils peuvent favoriser une adaptation plus efficace des parents d'enfants atteints de maladie chronique.

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PREDICTORS OF SUCCESS IN R.N. LICENCE EXAMINATION

John J. Jacono, Brenda J. Keehn and C. Corrigan

The usual outcome criteria against which schools of nursing science are measured are the graduation of their students, and their success in getting licensed to practise. Unfortunately not all graduating students obtain this licence - at least not on their first attempt. In a volatile marketplace characterised by peaks and troughs in personnel availability, some may view these first time failures as usurpers of limited access-to-programme places. Others note the potentially significant loss of revenue to the unsuccessful graduate, and the loss of one more professional to the system. These problems on their own would seem important enough to generate some attention to predictors of success on registration examinations.

As the literature review that follows will indicate, previously published material on the subject reveals that study of the problem was predominantly American based. Non-baccalaureate programmes have come under scrutiny more often than baccalaureate programmes. In addition, most of the studies reviewed concentrated their attention on predictors of success in graduating from a programme, rather than predictors of success in obtaining a licence to practise. All of this then, would seem to be another factor suggesting that this area might need further exploration in a Canadian context. When the authors noted the above, and significant fluctuation in failure rates among Laurentian University students across the years 1978 to 1986 (Table 1), they were prompted to carry out this study.

Statistics about the presence or absence of similar fluctuations in failure rates in other schools of nursing science were impossible to obtain. However, in our case, we noted that when the framework for the licensing examination changed from a medical model to a comprehensive framework (in August, 1980), the failure rate for Laurentian University students decreased. In spite of the fact that entrance requirements have been consistently upgraded, the failure rate shows a recent uptrend. (Table 1). In addition, while the annual Canadian failure rate is only 4%, (because examination results are standardised), the ratio (baccalaureate to diploma prepared nurses) of these failures is unavailable.

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Table 1

Failure Rate (%) in Obtaining a Licence to Practise (R. N.) at First Attempt. Nursing Science Students at L. O. by Year.

Year	Number Writing*	Number Failing	%Failing
1978	16	3	18.7%
1979	18	3	16.7%
1980	26	8	30.7%
1981	17	0	0.0%
1982	16	0	0.0%
1983	13	0	0.0%
1984	26	0	0.0%
1985	39	3	7.7%
1986	49	6	12.2%

* Includes transfers, second degree as well as students admitted to programme directly from high school.

These factors collectively suggested that the whole area of predictors of success in registration examinations merited further investigation.

Problem Definition

This study was designed to identify those factors of importance in success on the licensing examination. It also was designed to identify predictors of success in the programme itself. All students writing registration examinations must be graduates of a nursing programme, and as such success in the programme here refers to the hierarchical rank of the students' grades. Success on the registration examination, on the other hand, was looked at both in terms of actual grades as well as pass/fail categories. It was hoped that by identifying both predictors of programme success and of licensing examination success, commonalities might emerge that would allow for better identification of those students who would be most likely to succeed in both outcome criteria for nursing programmes.

Literature Review

The High School Grade Point Average (G.P.A.) has often been considered a good predictor. Sharp (1984) found significant correlations between high school G.P.A. and success or failure on licensing examinations. However, significantly more robust correlations emerged when this variable was united with other "cognitive" variables. Dell and Hapin (1984) appear to confirm

these findings, in addition they stated that the high school G.P.A. was a better predictor of success in the programme than success in obtaining a licence to practise. This had also been confirmed previously by Tillinghast and Norris (1968).

An increasing emphasis in the "science" aspect of nursing science programmes, has resulted in particular Grade 13 courses being assigned more weight (value) in admission parameters. Not surprisingly these subjects are science courses. No study that considered particular pre-requisite to entry-to-programme courses as predictors of success could be found. However, Weinstein, Brown and Wahlstrom (1980) found that performance in high school English and the number of pure or applied science courses taken, were good predictors of success in a diploma programme. The results of pure and applied science courses (on their own), were the best predictors of success.

Some studies reviewed, in addition to the high school G.P.A. also examined the effects of the grade point average obtained by the student in all nursing courses taken in the programme; of the cumulative grade point average calculated on all courses taken during the programme; of the grade point average on specific nursing/non-nursing composite groupings; and of the grade point average for specific programme years or semesters.

As will be indicated, the results of these studies have been varied at best. Melcolm, Venn and Blausell (1981) found few significant correlations between cumulative averages and results on the licensing examination. For this reason alone, this area merits further investigation. In addition, Yocom and Scherubel (1985), further found that grade point averages for certain programme years (sophomore, junior, and senior), were statistically significantly correlated to licensing examination results. This latter finding may help explain some of the different findings for the various studies.

Review of studies that considered grade point averages in nursing courses as predictors of success in obtaining a licence to practise, once again, revealed variable results. Yocom and Scherubel (1985) elicited significant correlations between grade point averages attained on all nursing courses and success on licence examinations. These relationships had previously been proposed by Dell and Hapin (1984). However, Melcolm, Venn and Blausell (1981) had previously found that grades obtained in Nursing Theory courses were better predictors of success than those in Clinical Nursing courses. The problem is further compounded by reported statistically significant relationships between other non-nursing courses (usually taken as required courses in a programme), and success on licence examinations. Clemence and Brinks (1978) are an excellent case in point. They reported that Introductory Psychology, Developmental Psychology and Abnormal Psychology, were not only related to success or failure on license examinations, but also appeared to be good indices of

success in the programme itself. They further reported that Sociology was associated with success or failure on licence examinations, but not to the level of success (hierarchical ranking) on these examinations. Finally, their data suggested that Physics was related to the length of time it took a student to finish the programme satisfactorily but not to success or failure on licence examinations; Anatomy and Physiology were related to B.Sc.N. programme completion and success or failure on licence examination but not to programme success. Clearly, while information on the topic is substantial, results published are not readily usable as a source of guidance. Work by one of the authors on a provincial accreditation committee confirmed a substantial uniformity of curriculum in Canadian B.Sc.N. programmes. This then seemed to make our task somewhat easier and our results more applicable.

The Population

The target population for the study was all students who had graduated from the Laurentian University school of Nursing Science and had written licensing examinations between 1978 and 1986. The total population was 220 students. This population was mixed (some students had entered the programme directly from high school, some had transferred from other universities or from other programmes, while others were second degree students), therefore potential confounding variables were eliminated through inclusion/exclusion criteria. Subjects were included in this study if they had been admitted to the programme directly from their high school experience, and if they were writing their licensing examination for the first time. The sample then was made up of 121 students from a potential pool of 220 students.

Method

Students records obtained from the university's Registrar of Admissions were examined to obtain the following information;

1. High school marks in Chemistry, Biology, English/French and three other subjects of choice presented by the student for consideration-to-admit to the programme.
2. A grade point average obtained in the completed B.Sc.N. programme.
3. A grade point average for all nursing courses taken in the programme.
4. A grade point average for courses deemed to include a high degree of theoretical/conceptual content.
5. Terminal marks in Biology courses, Chemistry courses, and Psychology courses.

In addition, the mark(s) obtained in the R.N. licensing examinations were obtained for the licensing body. For students writing comprehensive examinations, their success on the examinations was looked at in terms of pass/fail and

actual scores obtained. For those students who wrote licensing examinations prior to the change over in August of 1980, success was looked at in terms of pass/fail as well as the mean grade for the five components of the examination. By definition, this study was limited to information obtained from the records of students enrolled in one school of nursing science during a previously defined period. The marks registered in each of these categories govern the students' progression, thus they must be assumed to be reliable. Their predictive validity is assumed, and therefore they are included as variables.

Data were subjected to factor analyses, discriminant function analyses, analyses of variance and descriptive statistical techniques.

Results

The sample was composed of 121 students (119 females, 2 males) ranging from 18 to 23 years in age at admission to the programme with a mean of 19.1 years. 1974 was the first admission year included in the study, and 1982 the last programme year included. Of these students, 107 (88.4%), obtained their licence on the first attempt, while 14 (11.6%) required subsequent attempts.

The first and perhaps most important question that needed answering related to the reliability and validity of entry to programme criteria. In other words, do Grade 13 marks on a variety of subjects (some required, some elective), give admission to programme committees some indication of potential for success? Table 2 suggests that, using this information alone, some 32% of all applicants would have been incorrectly classified. Moreover, an Eigenvalue of less than 0.1, in association with a Wilk's Lambda of 0.9370423 confirms that these criteria account for less than 10% of the variance explaining success or failure in the R.N. examination. Clearly Grade 13 Biology, Chemistry, English/French and three other subjects of choice were poor criteria for entry to programme determination if the terminal objective is to predict success in getting licensed on the first attempt. This is further confirmed in Table 3 which

Table 2

Efficiencies of Discriminant Functions of Grades in All Admission to Programme Subjects as Predictors of Success or Failure on R.N. Examinations.

Actual Status (n)		Predicted Status		Correctly Classified (%)
		Success (%)	Failure (%)	
Success	107	69 (64.5%)	38 (35.5%)	66.94%
Failure	14	2 (14.3%)	12 (85.7%)	

Table 3

T-Test Between Means of Grade 13 Marks in Subjects Used as Criteria for Admission into B.Sc.N. Programme.

					Pooled Variance Estimate			Seperate Variance Estimate		
Var. Groups	(n) of Cases	Mean	F Value	2 Tail Probab.	T Value	(D.F.)	2 Tail Probab.	T Value	(D.F.)	2 Tail Probab.
Chem.	F 14	67.5714	1.65	0.313	-1.30	119	0.197	-1.57	19.1	0.132
	S 107	70.7383								
Biol.	F 14	75.0714	1.18	0.612	-0.41	119	0.682	-0.39	16.0	0.705
	S 107	76.0093								
G.P.A.	F 14	73.6429	2.31	0.091	-0.32	119	0.753	-0.43	21.8	0.669
	S 107	74.1308								

Group S- Success on R.N. exam

F- Failure on R.N. exam

indicates that the differences between means of both the successful and unsuccessful groups were not statistically significant.

Admission to the programme must be and is based on previous academic performance, as such, these indices must have some value. Table 4 is a correlation matrix of all the variables in the study. Admission G.P.A. (the average of six Grade 13 courses), is significantly related to all the other variables in the study ($p < 0.05$). The relationship of Admission G.P.A. to results on the R.N. examination is only marginally significant ($p = 0.042$), while all of the other variables are significant at $p < 0.01$. Additionally, both Grade 13 Biology and Chemistry, examined in isolation, are significantly related to other variables included. A note of caution must be introduced here. Intuitively, preparation in Chemistry and Biology would be strongly related to university level courses in the same subjects. In reality, Grade 13 Chemistry accounts for only 13% of the variance in Organic Chemistry and 6% in Biochemistry. Similarly, Grade 13 Biology explains only 13% of the variance in Anatomy, 12% of the variance in Micro-biology and 18% of the variance in Human Physiology. Interestingly, Grade 13 Biology appears to explain 23% of the variance in all nursing courses. They are however as suggested, not a good predictor of success in obtaining a licence to practise.

It would also appear from results exhibited in Table 4 that science-based courses requiring systematic didactic principles relate well to courses that require a high degree of conceptual thought. In particular, Anatomy, Physiology, Micro-biology and Developmental Psychology individually explain more than 30% of the variance in conceptual thought courses. Conceptual thought courses include Concepts of Illness, Issues in Nursing, Nursing Theory, Epidemiology, Biostatistics and Research. Neither the three Grade 13 elective

Table 4*Pearson's Correlation Coefficients (r) Between Variables Studied and Marks Obtained on the R.N. Examination (n = 121 Students).*

	Anatomy	Organic Chemistry	Intro Psych.	Micro-Biology	Human Physiol.	Bio-Chemistry	Develop. Psych.	Nursing Courses	Concept Courses	R.N. Exam
Admission G.P.A.	**	**	**	**	**	**	**	**	**	*
Grade 13 Chemistry	0.5609	0.5203	0.3834	0.4768	0.5685	0.4624	0.3702	0.5582	0.5172	0.1820
Grade 13 Biology	**	**	**	**	**	**	*	**	**	*
Grade 13 Chemistry	0.3620	0.3552	0.2731	0.3635	0.3658	0.2502	0.1753	0.2743	0.2521	0.0929
Grade 13 Biology	**	**	**	**	**	**	**	**	**	*
Grade 13 Biology	0.3590	0.4440	0.3298	0.3523	0.4248	0.3278	0.4029	0.4816	0.4162	0.2134
Anatomy	1.0000	**	**	**	**	**	**	**	**	**
Anatomy		0.7098	0.5489	0.6994	0.6858	0.5796	0.4429	0.6445	0.5801	0.3093
Organic Chemistry		1.0000	**	**	**	**	**	**	**	**
Organic Chemistry			0.6913	0.6883	0.6670	0.5933	0.5429	0.6078	0.5451	0.3683
Introductory Psychology			1.0000	**	**	**	**	**	**	**
Introductory Psychology				0.5647	0.5647	0.4116	0.5094	0.5511	0.4932	0.5196
Micro-biology				1.0000	**	**	**	**	**	**
Micro-biology					0.7604	0.5216	0.5469	0.6618	0.5797	0.5141
Human Physiology					1.0000	**	**	**	**	**
Human Physiology						0.6461	0.5275	0.7523	0.6861	0.4644
Bio-chemistry						1.0000	**	**	**	*
Bio-chemistry							0.4451	0.6118	0.5359	0.1992
Developmental Psychology							1.0000	**	**	**
Developmental Psychology								0.6337	0.5530	0.3980
Nursing Courses G.P.A.								1.0000	**	**
Nursing Courses G.P.A.									0.8649	0.5383
Conceptual Courses									1.0000	**
Conceptual Courses										0.4449
B. Sc. N. Prog. G.P.A.										**
B. Sc. N. Prog. G.P.A.										0.5283

* $p \leq 0.05$ ** $p \leq 0.01$

courses, nor mother tongue were included in this matrix, because the elective courses included a large variety of subjects. Mother tongue was problematic because, until recently, most courses have been delivered in English. The applicant then would have had to be comfortable working in the English language. Most courses at Laurentian University are now available in both official languages.

Table 5

Factor Analysis on Independent Variables.

Variables	Factor 1 General	Factor 2 Grade 13	Factor 3 Language
B. Sc. N. Programme G.P.A.	.94969		
Nursing Courses G.P.A.	.88367		
Human Physiology	.87033		
Micro-biology	.82203		
Anatomy	.81967		
Conceptual Content Courses	.80651		
Organic Chemistry	.80112		
Introductory Psychology	.71616		
Admission G.P.A.	.71025	.57550	
Bio-chemistry	.71018		
Developmental Psychology	.69441		
Grade 13 Biology	.57879		
Grade 13 Chemistry		.64058	
English Mother Tongue			.63997
French Mother Tongue			-.73603

Only Factors Loading ≥ 0.50 used

Independent variables were submitted to factor analyses. Only variables with an Eigenvalue equal to or greater than 0.5 were included. This technique yielded three factors exhibited in Table 5. Not surprisingly, the most robust loadings (Eigenvalue > 0.8), in the larger of the three factors included the Programme G.P.A., Nursing courses G.P.A., Physiology, Microbiology, Anatomy, Concept courses G.P.A. and Organic Chemistry. Examining these courses (but excluding Grade 13 courses already dealt with), Table 6 illustrates the significance of differences between means for these variables, obtained by successful and unsuccessful candidates. The between-group variance ($p < 0.06$, two-tailed), for Micro-biology, Programme G.P.A., and Nursing content courses were significantly different. In relation to Organic Chemistry, Bio-chemistry, Anatomy, Human Physiology, Introductory Psychology, Developmental Psychology and conceptual content courses, the between-groups variance was not statistically significantly different. The "t" value for Separate

Variance Estimate however, suggests that successful candidates obtained higher marks than unsuccessful candidates in Organic Chemistry, Human Physiology, Introductory Psychology, Developmental Psychology, and conceptual thought courses. There appears to be no difference between or within groups in relation to Bio-chemistry and Anatomy.

Table 6

T-Test Between Means of B.Sc. N. Programme Subjects Taken by Students Successful/Unsuccessful in the R.N. Examination

Var.	Groups	(n) of Cases	Mean	F Value	2 Tail Probab.	Pooled Variance Estimate			Seperate Variance Estimate		
						T Value	(D.F.)	2 Tail Probab.	T Value	(D.F.)	2 Tail Probab.
Organic Chemistry	F	14	67.5714	1.34	0.567	-2.91	119	0.004	-3.26	17.9	0.004
	S	107	73.3084								
Bio-Chemistry	F	14	67.2857	1.71	0.275	-0.48	119	0.634	-1.58	19.4	0.564
	S	107	68.7570								
Anatomy	F	14	70.1429	1.25	0.686	-1.45	119	0.149	-1.58	17.5	0.131
	S	107	73.3925								
Micro-Biology	F	14	59.2857	2.93	0.033	-4.07	119	0.000	-6.07	24.5	0.000
	S	107	69.6729								
Human Physiology	F	14	56.0714	1.72	0.269	-4.26	119	0.000	-5.25	19.4	0.000
	S	107	68.1495								
Introductory Psychology	F	14	66.2857	1.10	0.731	-4.51	119	0.000	-4.34	16.2	0.000
	S	107	75.6262								
Developmental Psychology	F	14	70.7857	1.26	0.675	-1.84	119	0.068	-2.01	17.6	0.059
	S	107	74.3178								
Program Average	F	14	70.2571	2.62	0.054	-2.78	119	0.006	-3.99	23.1	0.001
	S	107	73.8234								
Nursing Courses	F	14	71.4929	3.08	0.026	-2.38	119	0.019	-3.60	25.1	0.0001
	S	107	74.4000								
Concept Courses	F	14	72.2143	1.64	0.316	-1.69	119	0.094	-2.04	19.1	0.055
	S	107	74.6822								

Group: S- Success on R.N. exam
F- Failure on R.N. exam

The data then suggest that successful candidates tend to score significantly higher than unsuccessful candidates in Micro-biology and nursing courses and tend to have a higher programme G.P.A. In addition, the successful candidates, examined separately, tend to score higher than their unsuccessful peers in

Organic Chemistry, Human Physiology, Introductory Psychology, Developmental Psychology and conceptual content courses. Neither Bio-chemistry nor Anatomy seem to indicate differences between these two groups.

The three factors elicited from factor analyses (Table 5) were labelled "General" (Factor 1), "Grade 13" (Factor 2), and "Language" (Factor 3). These factors were submitted to discriminant function analyses with the results of the R.N. examination as the dependent variable. Table (7) demonstrates the efficiencies of these factors in predicting success/failure in obtaining a licence to practise. Patently, the strongest predictor (89.26% correct classification), is Factor 1. Both Factors 2 and 3 approach the pure chance level of predictive value. More importantly, while Factors 2 and 3 manage to explain less than 1% of the variance (Wilk's Lambda = 0.98211, 0.98922), Factor 1 explains 34% of the variance.

Table 7

Efficiencies of discriminant Functions of Factors Predicting Success or Failure on R.N. Examinations.

Variable	Actual Status	(n)	Predicted Status		Correctly Classified (%)
			Success (%)	Failure (%)	
Factor 1	Success	107	97 (90.7%)	10 (9.3%)	89.26%
	Failure	14	3 (21.4%)	11 (78.6%)	
Factor 2	Success	107	66 (61.7%)	41 (38.3%)	61.16%
	Failure	14	6 (42.9%)	8 (57.1%)	
Factor 3	Success	107	58 (54.2%)	49 (45.8%)	54.55%
	Failure	14	6 (42.9%)	8 (57.1%)	
	Eigenvalue	Correlation	Wilks' Lambda	X ²	Significance
Factor 1	0.51661	0.58364	0.65937	46.854	0.0000
Factor 2	0.01822	0.13375	0.98211	2.1301	0.345
Factor 3	0.01090	0.10382	0.98922	1.2788	0.5276

Conclusions

Like all other authors, we aimed to produce the definitive source of guidance for our colleagues facing annual dilemmas. Probably, like them, we too have failed to account for the multiplicity of confounding factors that conspire to make human nature difficult to predict. Candidates applying for first time entry into the programme have to be admitted on the basis of some criteria, in particular because large numbers vie for limited space. At Laurentian University, the Grade 13 grade point average provides the first selection hurdle, with marks in chemistry and biology providing further delimiters. Analyses discussed above suggest that admission grades are not particularly good predictors of success in obtaining a licence to practise; but do in fact correlate well with first and second year performance in the programme. This is probably no more than can be asked of these criteria. When it comes to predicting success in the R.N. examination, most of the subjects taken during the four-year programme contribute. In particular, our groups were differentiated on the basis of marks obtained in Organic Chemistry, Micro-biology, Human Physiology, Introductory Psychology, Developmental Psychology, nursing content courses, conceptual content courses and, of course, the programmes' terminal grade point average. Even so, the clearest between-group differences were produced by only three variables: Micro-biology, nursing content courses and terminal programme grade point average.

In the final analysis, each student is allowed to take the R.N. licensing examination once they have satisfactorily completed their programme. Satisfactory completion of the programme is based on grade point averages set by the university issuing the degree. One could consider withholding permission to write the R.N. exams if the grade point average (although sufficient to earn a university degree) may not be deemed sufficient to allow one to write the licence examination. This we feel would make a mockery of a quintessentially humanistic science, and would probably be successfully rebutted in the courts. In addition, there does not seem to be any evidence that marks obtained in a programme teaching nursing science translate into quality care at the bedside.

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RÉSUMÉ

Indices de prévision de succès aux examens de permis d'exercice des infirmières et infirmiers.

Les antécédents scolaires de 121 diplômés du programme de B.Sc.N. auquel ils avaient été admis directement ont été examinés. Les matières choisies en 13^e année, présentées comme preuve d'aptitude à l'admission au programme, ne se sont pas avérées de bons indices de prévision du succès ou de l'échec à l'examen de sciences infirmières. Elles peuvent toutefois être de bons indices des résultats qu'obtiendront les étudiants au cours des deux premières années du programme. Les matières qui ont le mieux permis de distinguer les étudiants qui ont réussi des candidats qui ont échoué ont été la microbiologie, les cours de sciences infirmières; la moyenne des notes pondérées du programme de B.Sc.N. y a également contribué.

ANATOMY IN THE NURSING CURRICULUM: A COMPARISON OF TEACHING APPROACHES

Kathryn Lewis and Carmen Morin

Since its inception in 1959, the Faculty of Nursing at the University of New Brunswick has based its program on an integrated curriculum model. Curriculum threads such as anatomy, pharmacology and nutrition were included with appropriate nursing content throughout the program. Over the years, faculty members readily accepted the premise that knowledge could be better stored and utilized if it were related to and presented with its "mother content".

However, as several hundred students graduated over the subsequent two decades, they frequently expressed concern that their knowledge of anatomy was inadequate. Faculty members' review of this situation raised further questions. Was this phenomenon due to the students' lack of study and review? Did faculty members expect students to acquire anatomy knowledge on their own? Was the integrated curriculum merely another untested "bandwagon"? Does blocked content provide a better basis in certain content areas? Anxious to rectify any curriculum inadequacies, but also to be cautious in making curriculum decisions based on fact rather than fancy, faculty members implemented the following plans.

1. To initiate a compulsory course in "Human Anatomy" which would be given in the second term of the first year of the nursing program, beginning with the freshman class of 1981.
2. To continue the integrated anatomy approach with all classes that entered the program before 1981.
3. To evaluate and compare the effects of the integrated and the segregated approaches over a time span of five years.
4. To utilize the findings as one measure in determining which anatomy systems were effectively covered.

Literature

The blocking or segregating of specialized content in nursing curricula began at the turn of the century. It provided a means to formalize and expand the knowledge base of the nursing profession (Longway, 1972). This blocked

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content was organized around the medical model which remained the basis for nursing education until the early 1960s. About this time, the need to focus nursing care more on the individual patient rather than on a disease entity gave rise to the integrated curriculum model (Jourard, 1962; Longway, 1972). Pardue (1979) and Styles (1976) both accepted the National League of Nursing's definition of the integrated curriculum as a "blending of the nursing content in such a way as the parts or specialties are no longer distinguished".

The 1960s and early 1970s saw most nursing programs achieve "integration" with obvious success in relation to the goal of individualizing patient care. Another positive aspect of the integrated curriculum was a supposed "reduction in repetition and duplication of content" (Pardue, 1979). However, there is very little in the literature regarding "student satisfaction", "student learning" and "the application of theory to nursing practice", in an integrated curriculum. Styles (1976) acknowledged that students have been disillusioned by the "integrated curriculum". Their unmet need for the "cold facts, technical skills and the drama of the life-death environment" left many of them feeling inadequate upon graduation.

Pardue (1979) cited Bailey, MacDonald, Frederick and Claus whose findings indicated that problem-solving skills, creativity and a broad perspective of the nursing profession were improved by an integrated curriculum. However, Stone and Green (1975) found that students from a blocked-content class obtained better results on state board examinations than did those from the integrated-content class. Pardue's (1979) own study found no significant difference in critical thinking between groups from the integrated and blocked curricula, but the students from the latter programs did perform significantly higher on their state board exams. However, as Pardue pointed out, those examinations were based on the medical model; therefore, the higher scores of the blocked-curricula group would be expected.

Knowledge of anatomy has long been considered important to the nursing student. Murphy and Backlund (1964) believe that it is a necessary basis to the understanding of body systems in health and illness. Kinsinger (1967) identified anatomy theory as a necessary "framework for building medical vocabulary" and a base for all students in the health profession. However, his second premise was that this course could be better taught by experts in that area and that nurses should teach what they know best - nursing. As early as 1957, Thompson and Leavell maintained that anatomy in the nursing curriculum should emphasize the function and the "dynamic state" of the body rather than just the "nondynamic details" one would acquire in a pure anatomy course.

Aside from the obvious place anatomy theory has in the health professions, only two studies showed concern for the educational process or teaching method best suited to its mastery and retention. Treble (1975) found that the

use of behavioral objectives in an anatomy-laboratory course facilitated long-term retention. Imbos, Drukker, van Mameren and Verwijnen (1984) compared a group of medical students who had taken conventional anatomy courses with a group from the Maastricht problem-based curriculum. The students in the problem-based curriculum who studied independently, initially achieved lower scores on anatomy tests. However, this phenomenon was followed by a steady increase in knowledge over the years. By the end of the programs, the problem-based group achieved higher anatomy scores than did its counterpart in conventional courses.

The Purpose

The purpose of the project was to determine whether or not a segregated course would significantly alter the anatomy knowledge levels of basic baccalaureate nursing students.

The question to be answered was: Would there be any difference in anatomy-knowledge levels, either general or of specific systems, between the integrated- and the segregated-approach groups; a) by the end of the baccalaureate program, b) on a year-by-year basis?

Method

Population

All of the nursing classes in the baccalaureate programs between September, 1980 and June, 1985 were asked to participate in the study. The 53 students who had entered in program in September, 1980 were labelled the "integrated-approach group", and the 63 students who entered the program in September, 1981, the "segregated-approach group". These two groups of students were used for testing the independent variable in the study and were tested yearly (see Table 1). Student groups that had entered the program before September, 1980, and after September, 1982, were also tested yearly. However, the data from these 505 students were used only in analysis of the test items in the measurement tool, a 48-item multiple choice anatomy quiz.

Variables

The independent variable in this comparison study was the mode of teaching anatomy to each of the two groups of students. The study was not able to control for other variables such as repeating students, individual instructor effect, or for the number and ability of students who participated.

Table 1

The Difference of Mean Overall Scores Between the Integrated (I) and Segregated (S) Groups

	Year of Program	Year ^a Tested	n	Mean ^b	S.D. ^c	p ^d
I	1	1981	53	18.45	3.93	
S	1	1982	63	21.76	5.16	0.000*
I	2	1982	40	20.50	4.79	
S	2	1983	53	21.00	4.20	0.549
I	3	1983	25	23.00	4.28	
S	3	1984	47	23.28	4.06	0.788
I	4	1984	33	23.12	4.55	
S	4	1985	34	23.62	4.81	0.666

a) Anatomy quizzes were done at the end of each year so 1981 refers to class of 1980-81 etc.

b) Mean overall scores are out of a maximum possible score of 48 and are rounded to two decimal places.

c) Standard deviations are rounded to two decimal places.

d) $p < .05$ on a two-tailed t test; significant values are marked with *.

The dependent variable was the anatomy-knowledge level of the two student groups, as evidenced by their scores on the anatomy quiz.

The integrated-approach group

For the students in the "integrated" group, any anatomy instruction was given in conjunction with relevant nursing content. There was no formal plan for how the anatomy thread would be applied across the program. Individual instructors gave as much information as they felt necessary to lay a basis for patient assessment or disease entities. This group used Evans' (1976) *Anatomy and Physiology* as their text for use throughout the entire baccalaureate program.

The segregated-approach group

For students in the "segregated" group, anatomy instruction was given in the form of a separate course. Three hours of classes per week, over a 13-week term, covered the following 12 systems: the cardiovascular system, the endocrine system, the reproductive system, the respiratory system, the nervous system, the special senses, the urinary system, the lymphatic system, the skeletal system, the muscular system, the integumentary system and the digestive system. The students were taught by a team of faculty members, each

covering one system with enough time allotted to provide depth of detail. A midterm test and a final exam were used to evaluate the students' level of knowledge in this compulsory course. These tests had no relationship to the 48-item quiz used in the study. This group used Spence and Mason's (1979) *Human Anatomy and Physiology* as a text for their course and as a reference throughout the remainder of their program.

Both the integrated group and the segregated group had access to the audiovisual aids in the self-instructional laboratory. In addition to the authors, many of the same faculty members who had taught the integrated anatomy content taught one of the body systems in the anatomy course. In their second year, members of both groups were required to successfully complete a physiology course taught by the Biology Department. However, this course contained a negligible amount of anatomy content particularly in relation to the systems covered by the segregated course given by the Nursing Faculty. It was felt that this course would have minimal interference as a confounding variable in this study.

The instrument

The computer-marked multiple choice questionnaire was prepared by the authors. The same 12 systems that constituted the anatomy course were used as the basis for the test. In turn, four questions were developed for each system so that the 48-item test could be completed by students in a 15 - to 20 - minute sitting. In an attempt to evaluate depth of detail, the four questions were prepared at increasing levels of difficulty, as based on the judgement of the authors.

The testing

The student groups were tested at the end of their academic year. The students were advised that completion of the questionnaire implied their consent, so that, although they were tested in year-groups, individual participation was strictly voluntary. Anonymity for individual students was ensured by the random distribution of computer-response cards that had been pre-coded so as to identify only the year, class and number of students participating in each year-group. No attempt was made to follow individual student progress across the program.

Data Analysis

Two types of scores were obtained from the computer response cards: overall scores and system scores. The overall score was the sum of all the questions answered correctly, with a maximum possible score of 48. Each

system score was the sum of the four questions in each of the 12 systems, with a maximum score of four.

Analysis of Variance was used to determine differences and similarities between the groups. The level of significant differences was set at $p < .05$ on a two-tailed t test.

Findings

1. The mean overall scores at the end of the first year showed a significant difference between the groups, with the segregated-approach group having the highest scores (see Table 1).

The mean scores of individual systems at the end of the first year showed a statistically significant difference (*) in six of the 12-body systems (see Table 2). The segregated-approach group had higher scores on five of those six systems.

2. At the end of years two, three and four, there was no statistically significant difference between the integrated- and segregated-approach on the basis of the mean overall-scores (see Table 1).

At the end of years two and three, there were no significant differences between the integrated- and segregated-approach on nine of the 12 system scores. Of the three systems with significant differences (*), the segregated-approach group had higher scores on two; the special senses and the lymphatic system in the second year, and the respiratory and the lymphatic systems in the third year.

At the end of year four, only the skeletal system score differences were significant with the integrated-approach group having the higher scores (see Table 2).

Limitations

1. The reliability and validity of the test instrument were not established prior to testing. However, an after-the-fact item analysis was done on all the quizzes.

2. The same instrument was used repeatedly with only a one-year interval between testings.

3. The number of students in the same class who participated from year to year varied (See Table 1).

Discussion

At the end of their first year, the segregated course group outscored the integrated group by a statistically significant difference. However, one would expect these results when comparing first year students in a program, as the integrated group had little classroom and clinical experience to counteract the intensive anatomy course received by the segregated group. The similarity

Table 2***The Differences of Mean System Scores Between the Integrated and Segregated Groups***

System	Year 1	Year 2	Year 3	Year 4
Cardiovascular	.233 ^a	-.064 ^b	.037	.118
Endocrine	.303	.106	-.277	-.097
Reproductive	.148	-.291	.231	-.079
Respiratory	.913 ^{ac}	.296	.682 [*]	.450
Nervous	.454 [*]	-.005	.198	.158
Special Senses	.491 [*]	.489	.202	.285
Urinary	.112	-.222	-.319	-.090
Lymphatic	.933 [*]	.411 [*]	.699 [*]	.161
Skeletal	-.414 [*]	-.573 [*]	-.575 [*]	-.683 [*]
Muscular	.574 [*]	.011	-.219	-.120
Integumentary	-.327	.116	-.159	.009
Digestive	-.111	.225	.240	.386
Overall Score	3.309 ^{ad}	.500	.277	.500

a) Mean system-score differences are out of a maximum possible score of 4.

b) (-) values indicate the scores in the integrated-approach group were higher than those in the segregated-approach group.

c) * indicates the difference is statistically significant using Analysis of Variance technique with $p < .05$ on a two-tailed t test.

d) Mean overall-score differences are out of a maximum possible score of 48.

between the groups' overall mean scores at the end of the second, third and fourth years could be explained by several factors. First, as the students progressed through the program, the cumulated clinical and classroom exposure, in effect, caused an equalization of anatomy knowledge between the two groups. Secondly, those in the segregated group were beginning to forget their anatomy theory gained from the course and were retaining only that part that related to their clinical and classroom experience. Finally, the measurement tool was not obtaining an accurate estimate of the students' knowledge levels in that a cumulative effect on scores resulted from the repeated use of the same tool and the more difficult levels of items within each anatomical system were too difficult for either group thus reducing the sensitivity of the tool. This latter reason could also explain why all of the student groups segregated-approach achieved very low scores.

At the end of the first year, the segregated-approach group achieved significantly higher scores in five of the 12 anatomical systems (see Table 2). This could be explained by the fact that, of these five, only the respiratory system had been normally taught in the first year of the integrated-curriculum model and

the other four represented new material. On the other hand, the integrated-approach group scored higher on three systems, although only one of these was at a significant level. All three of these had been taught in the integrated-curriculum model and together with some physiology had been related to the stressor of "immobility". Perhaps in this context the anatomy information was better retained over a longer period of time; this could also explain why the skeletal system consistently showed the integrated group achieving higher scores at a significant level ($p < .05$ on a two-tailed t test) throughout the four-year program.

Concerning additional differences found between the systems scores in the second and third years of the programs, the segregated-course group surpassed the integrated group on respiratory system scores again in the third year. It is not known why. The superior scores on the lymphatic system that were achieved by the segregated-course group members for the first three years but not in the fourth year are best explained by the lack of content provided to the integrated group until their final year of the program.

The identical anatomy quiz was used repeatedly for all of the testings in the five year period. It was felt that this would provide a high level of consistency of measurement across the groups. It was recognized that repeated writings would have a certain cumulative effect on the scores in later years. However, all of the groups were equally exposed to this repetition.

The researchers did not account for the marked degree of variation in the number of student participants from year to year (see Table 1). However, this was an effect of the voluntary nature of the study and was beyond the control of the researchers.

The reliability and validity of the measurement tool, the 48-item multiple choice anatomy questionnaire were not pre-tested because of time restraints. However, an after-the-fact item analysis was carried out on all of the 853 quizzes. The easiest questions were substantiated in 11 of the 12 systems and the most difficult ones in nine of the 12 systems.

Overall, the results of this comparative study suggest that after the obvious expected differences at the end of the first year in which the course was given, there was essentially no difference in anatomy knowledge levels between the integrated-curriculum model group and the segregated-anatomy course group over a four-year baccalaureate nursing program.

Also, over the five years that the course was given, many complaints were voiced. Students found the anatomy course content boring, meaningless and isolated. This was substantiated further by their low grades. Faculty members

found that teaching pure anatomy was difficult and uninteresting at best. In response to this dissatisfaction, a more practical approach to anatomy education was implemented as soon as the data for this comparison study was obtained. In the 1985-86 year, anatomy was combined with physical assessment and taught by two faculty members with expertise in that area.

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RÉSUMÉ

L'anatomie au programme de sciences infirmières: comparaison de deux démarches pédagogiques.

On a comparé le degré de connaissances en anatomie des étudiants de baccalauréat en sciences infirmières formés selon deux démarches différentes, soit l'intégration des données anatomiques aux autres matières et l'enseignement de l'anatomie comme matière distincte. Les observations ont porté sur une période de cinq ans. La technique d'analyse de variance a été

utilisée pour déterminer les différences significatives à $p < 0,05$ (test bilatéral). L'étude a démontré, pour ce qui est des résultats globaux, qu'il n'existait de différences importantes entre les groupes qu'à la fin de la première année—soit immédiatement après le cours d'anatomie du groupe bénéficiant d'un enseignement distinct. Les différences importantes observées entre les groupes au chapitre des résultats obtenus pour des systèmes particuliers portaient sur six des douze systèmes à la fin de la quatrième année. Les résultats indiquent que l'intégration de l'enseignement de l'anatomie aux autres cours est tout aussi efficace sinon plus que l'enseignement de l'anatomie sous forme de cours distincts.

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COPING REVISITED: THE RELATION BETWEEN APPRAISED SERIOUSNESS OF AN EVENT, COPING RESPONSES AND ADJUSTMENT TO ILLNESS

**Jacqueline Roberts, Gina Browne, Barbara Brown, Carolyn Byrne,
and Barbara Love.**

Introduction

Quality of life issues are a major concern for nurses caring for patients receiving chronic care. Nurses must constantly assess how patients are coping with and adjusting to their illness.

The majority of the coping literature reports on the coping behaviours people use in handling stressful life events (Billings & Moos, 1981; Cohen & Lazarus, 1979; Felton, Revenson & Hinrichsen, 1984; Folkman & Lazarus, 1980). For nurses, the implication of such research has been to focus on subjects with more noticeable dysfunctional coping behaviours. However, neither the objective severity of the life event (such as major-minor burn injury) nor coping behaviours per se, have explained much variance (<10%) in a person's adjustment to illness (Browne, Byrne & Brown, 1985; Felton, Revenson & Hinrichsen, 1984).

Recent attention paid to the cognitive appraisal of stressful events has been based on the assumption that the meaning one attributes to an event may effect coping (Lazarus & Folkman, 1984; McCrae, 1984; Moos & Billings, 1982; Viney & Westbrook, 1984). Early attempts to tap this dimension of appraisal or perceived seriousness included assigning objective weights and rankings to more or less serious (stressful) events (Holmes & Rahe, 1967; Holmes & Masuda, 1974). For example, death of a spouse might be considered more stressful than divorce. This method of assigning objective weights or ranks to indicate the seriousness of an event has undergone recent criticism

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(Dohrenwend, Krusnoff, Askenasy & Dohrenwend, 1982; Miller, 1981; Perkins, 1982; Schroeder & Costa, 1984). The criticisms have ranged from rejecting the premise underlying such scales to listing the detailed methodological pitfalls in the construction of the scale. Further, a more highly correlated relation between the seriousness of an event and outcome has been observed when the subjective evaluation of the magnitude of an event was used in the rating procedure (Dohrenwend, Krusnoff, Askenasy & Dohrenwend, 1982).

Haan (1977; 1982) reviewed the literature which related peoples' subjective evaluation of events and their adjustment outcomes. He concluded that adjustment was more difficult when the event was not anticipated, was perceived as hopeless, was viewed as negative or serious and when the onset or outcome was out of one's control. This comprehensive approach to the subjective weighting of the seriousness of an event evaluates distinct assessments made by the subject concerning the desirability or seriousness, controllability and anticipation of the life event (Streiner, Norman, McFarlane & Roy, 1981). Dohrenwend and Dohrenwend, (1974), Fontana, Hughes, Marcus and Dowds, (1979) also support the proposition that adjustment to an event is more difficult when the event is viewed as serious, undesirable and unanticipated.

As part of a larger study measuring the psychosocial adjustment to a burn injury (Browne et al., 1985), specific data on life events, coping styles and adjustment outcomes on subjects who had experienced a burn injury were analyzed. These subjects had varying degrees of burn severity, but all had experienced a similar, unanticipated life event with potential seriousness and undesirability.

The goal of this study was to determine if the objective severity of a selected event would have value in distinguishing types of subjective judgements about the seriousness of the event itself or types of coping by previously burned subjects. Thus the intent of the research was to determine if subjective appraisal of the seriousness of an event was more important than objective rankings in accounting for variance in coping behaviours of previously burned subjects? In addition, we wanted to know whether the subjective evaluation is related to specific methods and foci of coping. Subjects appraised their events as serious or less serious in that it affected their daily living, job, and/or relationships with family or friends. Thus, four hypotheses were addressed;

1. Burned subjects' subjective appraisal of the seriousness of events is not related to the objective rankings given life events by Holmes and Rahe (1967).
2. Specific methods and foci of coping, as described by Billings & Moos (1981), differ for those burned subjects who appraised their life event as a major and for those who rated it as a minor one.

3. The Psychological Adjustment to Illness Scale outcome (PAIS) (Morrow, Chiarello & Deragotis, 1978) differs for burned subjects who appraised their life event as serious and for those who rated it as less serious.

4. Burned subjects' perceived seriousness of an event has more power (R^2) than the objective life event rankings of Holmes and Rahe (1967), in explaining the variance of specific important methods or foci of coping.

Method

Procedure

This correlational study, as part of an historical prospective cohort analytic study of adjustment to burn injury (Browne et al., 1985), included 256 randomly selected adults who sustained burns over the last 12 years and who attended a regional Burn Unit in Southern Ontario, Canada. Subjects completed the Billings and Moos Coping Scale (1981), which asked them to name a problem (the burn injury, or any other problem) that they had dealt with over the past year. The Social Readjustment Rating Scale (Holmes & Rahe, 1967) was used by the authors to assign scores to the life event. Subjects were also asked to appraise the seriousness of the event as either major or minor (ie. a major event had adverse impact on daily living, jobs or relationships with family and friends; a minor event did not have impact in these areas). Following this, the subjects indicated whether or not they employed any of the behaviours listed in the Coping Scale when reacting to the problem. In addition, subjects were interviewed and completed a psychosocial adjustment scale (PAIS) that indicated their adjustments to the burn injury and any changes in their social, domestic or vocational roles following their burn injury.

Instrument

The Billings & Moos Coping Scale (1981) is a 33-item inventory scored on a four-point scale and is designed to investigate how patients deal with problems. When scoring, items are grouped into cognitive, behavioural and avoidance methods of coping, as well as being classified into five foci of coping described as problem solving, information seeking, logical analysis, emotional discharge and affective regulation. The internal consistencies (Cronbach's alpha) for these subscales ranged from 0.60 to 0.80.

The Psychosocial Adjustment to Illness Scale (PAIS) is composed of 45 questions scored from "improvement or no change" (0) to "a great deal of change" (3) since the burn injury, in the areas of health care orientation, vocational environment, domestic environment, sexual relationships, extended family relationships, social environment and psychological distress (Morrow, 1978). The overall reported interrater reliability is $r=0.83$. Construct validity was assessed by relating health care orientation with the subjects' satisfaction with the care they received ($r=0.27$ and with their expectations

regarding care ($r=0.47$). Conversely, there was a significant negative correlation ($r=-0.35$) between the domain of health orientation and the "number of days ill or injured in the preceding 2 days" (Morrow, 1978).

The Social Readjustment Rating Scale (SRRS) (Holmes & Rahe, 1967) gives a rank score to each life event or an objective measure of the stressfulness of the event. It contains an estimate of the magnitude or seriousness of life events as derived from populations enlisted by Holmes & Rahe. Scale estimates yielded high coefficients of correlation ($r=.82$ to $.90$) (Dohrenwend & Dohrenwend, 1974).

Results

Specific demographic characteristics of the 256 study respondents are described in Table 1. There were no significant differences in age, gender or burn severity between those subjects who appraised their event as serious and those who appraised it as non-serious.

Table 1

Demographic Characteristics of Subjects (N=256)

		Subjective Appraisal	
		Serious (n=217)	Less Serious (n=39)
Age (in years)	(mean \pm S.D.) (range)	42 \pm 16 21 - 85	40 \pm 16 20 - 100
Gender	male female	80% 20%	82% 18%
Burn Severity	major burn minor burn	47% 53%	44% 56%

The effect of representativeness and location rate of the subjects who presented at the regional burn unit has been described elsewhere (Browne et al, 1985). Two clinically important and statistically significant differences found between the group interviewed and the group unable to be interviewed, were that more members of the interviewed group were married ($\chi^2=21.76$, $p < .05$) and employed at the time of the burn ($\chi^2=28.62$, $p < .05$), whereas non-interviewed subjects were more likely to be single, widowed or divorced; retired; and to have sustained their burn injury at home (Browne et al., 1985).

Of the 256 respondents, 217 (85%) evaluated their event as serious (major). The authors arrived at a consensus in categorizing the problems identified by the subjects that were related to work, family, finances, social situations, crime, residence, and health issues (Table 2). Thirty-seven percent of the subjects related a problem dealing with a health issue. The next most frequently categorized problem arose with family issues.

Table 2

Description of the Subjective Appraisals of the Severity Attributed to Life Events

		Subjective Appraisal	
	Categories of Events	Serious (Major)	Less Serious (Minor)
1.	School / Work	12%	5%
2.	Family	17%	4%
3.	Residence	3%	1%
4.	Crime	1%	0%
5.	Finances	15%	3%
6.	Social	1%	1%
7.	Health	36%	1%
		n=217 (85%)	n=29 (15%)

To test the hypothesis that there would be a low association between the subjective appraisal of the seriousness of the problem or event and objective ranking using Holmes and Rahe, a Pearson Product Moment Correlation Coefficient ($r=0.379$) was calculated. This indicates a weak correlation between these two evaluations, (subjective and objective), of the stress or seriousness of life events.

The hypothesis that there would be significant differences in specific methods or foci of coping according to whether subjects appraised their event as a major or as a minor one, was tested using independent t-tests (Table 3). Avoidance coping was more often used by subjects who evaluated the event as serious ($p < .05$). There was no difference between the means for cognitive and behavioural coping for either group. Two foci of coping, information seeking and emotional discharge were more often employed by subjects who viewed their event as more serious ($p < .05$).

As indicated in Table 3, the subjective appraisal of the life event also indicates a difference between mean scores for adjustment to illness. Those

Table 3

Mean Scores for Major Serious and Minor Less Serious Appraisal Groups

Subjective Appraisal of Seriousness					
	Serious mean (S.D.)		Less Serious mean (S.D.)		t-test
Methods of Coping					
* Avoidance	4.45	(3.36)	2.69	(1.4)	3.22
Behavioural	20.85	(6.35)	19.49	(5.7)	1.26
Cognitive	16.89	(5.18)	15.72	(4.7)	1.60
Foci of Coping					
Logical Analysis	6.84	(2.7)	6.84	(2.5)	0.02
* Information Seeking	13.01	(3.8)	10.38	(3.4)	4.15
Problem Solving	8.75	(3.2)	9.42	(2.8)	1.60
Affective Regulation	6.81	(3.7)	6.15	(3.8)	1.03
* Emotional Discharge	3.82	(2.8)	2.69	(1.7)	2.50
Psychosocial Adjustment					
* Total (PAIS)	14.03	(14.9)	7.18	(7.7)	3.00

* $p < .05$

that had appraised their life event as serious have higher psychosocial adjustment (PAIS) scores ($p < .05$), indicating poorer adjustment to the burn injury.

Subjective appraisal distinguished specific types of coping; as such the hypothesis examining the relative importance of the subjective and objective descriptions of the seriousness of the event was tested using forward stepwise multiple regression analysis (Table 4). The subjective appraisal entered the equations first before the Holmes and Rahe rankings, indicating that it is more important than the objective description in explaining the variance in coping strategies, although neither contribute a great deal to the variance.

Table 4

The Importance of Subjective Appraisal and Objective Rankings in Predicting Specific Coping Scores

Forward Multiple Regression Analysis				
	Multiple		Independent	
	R	R ²	F Value	r
Avoidance Coping				
* Subjective Assessment	.20	.04	10.35	.20
Objective Ranking	.22		2.56	.17
Information Seeking				
* Subjective Assessment	.25	.06	16.4	.25
Objective Ranking	.25		1.1	.15
Emotional Discharge				
* Subjective Assessment	.15	.02	6.06	.15
Objective Ranking	.15		.01	.06

* $p < .05$

Discussion

There are four major findings from this study. First, objective and subjective ratings are not well correlated. This indicates that the individual does not always interpret a life event with the same seriousness as others (such as health professionals).

Secondly, the subjective appraisal distinguished between specific coping behaviours. Three coping behaviours (avoidance, information seeking and emotional discharge) indicated important differences between subjective appraisal groups ($p < .05$). Of interest is that those who view their own event as serious used more types of coping behaviours that include "avoided being with people in general" and "tried to reduce tension by smoking", "drinking" and "taking more tranquilizers" more often than those who did not. In addition,

these subjects used information seeking behaviours such as "sought help from persons", "talked with friends" and "tried to find out more about the situation".

Thirdly, those who had appraised their life event as serious also had higher psychosocial adjustment to illness scores, indicating a poorer adjustment to their burn illness.

Finally, the subjective method of appraisal tends to be more important than the objective weights in distinguishing important specific coping behaviours. Subsequently, the subjective appraisal of what is at stake may influence the coping response.

Implications

These findings suggest that nurses should be aware of the subjects' own appraisal of a problem or life event and to use this data when establishing priorities for psychosocial care for burned subjects or for patients who have undergone a similar stressful life event. Perhaps additional nursing research could test the value of having the patient restructure or reappraise the seriousness of a life event. This strategy may be useful in changing one's coping responses and, ultimately, in adjustment outcome.

Our future research will be designed to relate the importance of perceived seriousness of the event to a multitude of other meanings or judgements that people give their own illnesses, the consequences associated with treatment and the reaction of others. These meanings or judgements may include anticipation, desirability, controllability and degree of interference with previous roles or commitments and, they could have more value in explaining the variation in different patients' adjustments to illness.

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RÉSUMÉ

Un réexamen des modes d'adaptation: le rapport entre la gravité perçue d'un événement, les mécanismes d'adaptation et l'ajustement à la maladie.

Les schèmes d'adaptation et les questions de qualité de vie sont au cœur des préoccupations des infirmiers qui soignent les malades et, particulièrement, des sujets brûlés, qui ont souvent des préoccupations de santé à long cours.

Dans le cadre d'une étude sur l'adaptation à la suite de brûlures, 256 adultes choisis au hasard parmi des sujets qui avaient subi des brûlures au cours des 12 dernières années ont rempli la Billings & Moos Coping Scale et la Psychological Adjustment to Illness Scale (PAIS). Ces sujets ont identifié un problème auquel ils avaient eu à faire face au cours de l'année écoulée et l'ont évalué comme étant un événement personnel important (grave) ou peu important (moins grave). Cet événement a également fait l'objet d'une évaluation objective telle que déterminée par le Social Readjustment Rating Scale.

Les résultats ont indiqué qu'il n'existait qu'une faible corrélation entre l'évaluation subjective et l'évaluation objective ($r=0,38$). L'évitement, la recherche de renseignements et la décharge affective ont été les mécanismes d'adaptation utilisés le plus fréquemment par ceux qui évaluaient leur événement comme étant grave ($p 0,05$). L'évaluation subjective était plus importante que les évaluations objectives quand il s'agissait d'expliquer la variance de ces mécanismes d'adaptation. Le groupe de sujets qui a évalué ses problèmes comme étant plus graves était également celui chez lequel on trouvait l'ajustement psychosocial à la maladie le plus faible ($p 0,05$).

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VALIDITY IN QUALITATIVE RESEARCH

Janet N. Rosenbaum

The complexity of human experience requires a variety of research methods for understanding nursing phenomena. In addition to quantitative methods, qualitative research, which brings a different research tradition to nursing, is gaining interest amongst researchers. However, it is time to move beyond debating the value of qualitative or quantitative research in nursing (Goodwin & Goodwin, 1984; Munhall, 1982.) Assuming that different methods help answer different research questions (Polit & Hungler, 1987; Leininger, 1985), it is timely to demonstrate the rigour of qualitative research.

The purpose of this paper is to discuss the issue of validity in qualitative research. Relatively little space is devoted explicitly to the topic of validity in many qualitative research textbooks (Munhall & Oiler, 1986, Parse, Coyne & Smith 1985) or in research reports giving readers the false impression that validity concepts receive only minor consideration. This author believes that qualitative researchers must increase documentation of the rigour of their research in order to gain credibility within the nursing science community.

The following questions will be answered in this paper.

1. Is instrument validity relevant in qualitative research?
2. Are concerns about internal and external validity relevant in qualitative research?
3. What are the threats to internal and external validity in qualitative research?
4. What attention is given to validity in qualitative nursing research textbooks and research reports?

Definitions of Validity

The literature identifies validity in a number of ways. One is in relation to instruments and the purpose for which they are used (Carmines & Zeller, 1979; Kerlinger, 1986; Nunnally, 1978). Cook and Campbell (1979) view validity differently, from the perspective of truth value of propositions rather than measurement issues in instrumentation. This paper considers both views of validity.

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Validity (instrument)

“Validity refers to the degree to which an instrument measures what it is supposed to be measuring” (Polit & Hungler, 1987, p. 323). It is guided by the question, “Are we measuring what we think we are measuring?” (Kerlinger, 1986, p.417). Further, there is the presupposition that reliability is necessary for validity (Polit & Hungler, 1987).

Internal validity

“Internal validity refers to the approximate validity with which we infer that a relationship between two variables is causal or that the absence of a relationship implies the absence of cause” (Cook & Campbell, 1979, p. 37).

External validity

“External validity refers to the approximate validity with which we can infer that the presumed causal relationship can be generalized to and across alternate measures of the cause and effect and across different types of persons, settings, and times” (Cook & Campbell, 1979, p. 37).

Validity (Instrument)

Validity, as it pertains to instrument measures, is sometimes viewed as having limited appropriateness in the discussion of qualitative research. According to Nunnally's (1978, p. 3) definition of measurement as “rules for assigning numbers to objects in such a way as to represent quantities of attributes,” qualitative research does not use measurement. However, Kerlinger (1986, p. 391) says that “in its broadest sense, measurement is the assignment of numerals to objects or events according to rules”, allowing for nominal level of measurement. In qualitative research, recurrent features such as patterns and themes are identified using classification systems (Leininger, 1985). Atwood and Hinds (1986) make a case that measurement is used in the grounded theory method and note that little attention has been given to validity and reliability.

Further, a number of qualitative research sources refer to the researcher as instrument (Dobbert, 1982; Lincoln & Guba, 1985). Dobbert says that the researcher, as instrument, may bring biases to data gathering. Hence a general discussion of validity (instrument), with the focus on content validity as being most relevant, proceeds before internal and external validity are explored. Researchers must be aware, through every phase of research, of their own likes, dislikes and prejudices as they relate to the participants or group being studied. Dobbert (1982) stresses that it is the unrecognized biases that cause validity problems; therefore, the researcher, as instrument must indulge in careful self-examination.

Lincoln and Guba (1985, p. 193) list the following benefits of the human as instrument:

1. Responsiveness
2. Adaptability
3. Holistic emphasis
4. Knowledge base expansion (domains of propositional and tacit knowledge)
5. Processual immediacy (process data as soon as available)
6. Opportunities for clarification and summarization
7. Opportunities to explore atypical or idiosyncratic responses

However, these authors say that human instruments, as well as paper and pencil instruments, are fallible and value laden. They suggest multiple benefits of using teams of "human instrumentation" (p. 236) to improve validity. For example, a team is more likely to have a member who shares the values of the informants than is one researcher alone. Teams may represent multiple disciplines, strategies and methods. They may provide checks of validity through mutual consultations, and sharing insights. With careful team training and implementation of strategies, the researchers as instruments are able to provide credibility.

In summary, instrument validity is a relevant factor in qualitative research when viewing the researcher as instrument, and when searching for themes and patterns.

Internal and External Validity

Cook and Campbell (1979, p. 37) consider validity in experimental research as "the best available approximation to the truth" propositions. They use the word "approximation" because they say that truth is never certain.

Are concerns about internal and external validity relevant in qualitative research? Le Compte and Goetz (1982) discuss the issue of validity from an ethnographic research perspective. They acknowledge that ethnographers historically have been less concerned about validity than quantitative researchers and hence have been subject to criticism. However, these authors identify several major differences between quantitative and ethnographic research that result in differences in formation of research problems, nature of goals and application of results of research.

Formation of the research problem in quantitative research involves eliminating extraneous and contextual factors in order to examine effects caused by a treatment. However, in ethnographic research the context is focal to inquiry

that rarely involves a treatment. "The naturalistic setting in which ethnography normally is conducted both facilitates on-the-spot analysis of causes and processes and precludes precise control of so-called extraneous factors" (Le Compte & Goetz, 1982, p. 33).

The nature of goals in qualitative and quantitative research differs especially regarding the stage of the research when theory is prominent (Le Compte & Goetz, 1982). Ethnographers often avoid a priori hypotheses or propositions using an inductive theory generating approach. In contrast, quantitative research is concerned with theory testing.

Generalization is often intended in quantitative research since the ideal is to have subjects who are randomly sampled (Le Compte & Goetz, 1982). Random sampling is often unrealized; therefore such strategies as replication and encouraging co-operation in recruitment of subjects to have representative subjects in a variety of settings may increase generalizability (Cook & Campbell, 1979). However, Le Compte and Goetz (1982) say that ethnographers usually do not have the opportunity to use these same strategies. Therefore they say that terms that are more appropriate for use in ethnography instead of generalization are comparability and translatability. Describing the characteristics of the group being studied permits decision about comparison with other groups (p. 34). By clearly identifying research methods and categories for analysis, translatability combines with comparability to provide a qualitative analog to generalizability across groups.

Le Compte and Goetz (1982) claim the high internal validity of ethnographic research is attributable to the data collection and analysis techniques. Pelto and Pelto (1978) show that living amongst the participants, collecting data over long periods of time using ethnographic interviewing techniques, doing on going data analysis, using natural settings that are reality for the participants and researcher self-monitoring are among the strategies that these authors say contribute to internal validity.

Le Compte and Goetz (1982) acknowledge that Cook and Campbell's (1979) threats to validity are relevant to ethnographic research and should be addressed even though the problems present themselves differently. Specifically, they identify the following threats to internal validity in ethnographic research: history and maturation, observer effects, selection and regression, mortality and spurious conclusions.

History is acknowledged to effect data collection (Le Compte & Goetz, 1982, p. 45) and "the ethnographic task is to establish which baseline data remain stable over time and which data change." This is done by establishing long-term residence in the field, using time-sampling procedures, comparing baseline data, revisiting sites and replicating. Many of these same strategies

also control for maturation. However, "ethnographers view maturational stages as varying according to cultural norms" (Le Compte & Goetz, 1982, p. 45). Therefore to control for maturation, ethnographers take care to differentiate behaviors which are expected in different socio-cultural groups.

What Le Compte and Goetz (1982) identify as observer effects are analogous to Cook and Campbell's (1979) testing and instrumentation threats in quantitative research. They acknowledge that participant observation, informant interviewing and auxiliary use of instruments all pose problems related to internal validity. Effects of observers' presence as a threat is compensated by establishing a number of field relationships, maintaining an appropriate balance of engagement and neutrality in informant relationships, analyzing field relationships and remaining in the field long enough to reduce factitious informant responses. "Going native", a problem that occurs when the researcher is over-involved to the point that objectivity can no longer be maintained, requires temporary disengagement (Le Compte & Goetz, 1982, p. 7).

Researchers should be aware of their own ethnocentric bias in guarding against observer effects. Le Compte and Goetz (1982) say that researchers must ensure that the perspective of the informants is maintained by getting feedback from the informants to affirm that the researchers have made correct interpretations.

Selection and regression effects which are of concern to ethnographic researchers, are tempered in a number of ways. By compiling an inventory of sub-groups in the field, interacting with a diversity of informants, and questioning assumed meanings, representative findings are more likely to result (Le Compte & Goetz, 1982). The issue of mortality is also addressed by these authors because groups change over time. By collecting baseline data, the losses and gains in group memberships will be documented, and their effects will be identified. However, "the naturalistic approach prevents the interchangeability of human informants and participants" (p.49).

As for external validity, Le Compte and Goetz (1982) say that the nature of ethnographic research often prevents generalizing across groups. Descriptive data are usually sought regarding relatively unknown phenomena for the purpose of explication, and informants are not randomly selected. These authors include the following threats to external validity that reduce cross-group comparisons in ethnographic research: selection, setting, and history effects.

Selection effects are a problem when the researcher designates categories which do not match the reality of the group studied. "Some constructs cannot be compared across groups because they are specific to a single group or

because the researcher mistakenly has chosen groups for which the construct does not obtain" (Le Compte & Goetz, 1982, p. 51). Denzin (1978) says similarly that participant observers must study informants who are representative of their group, if generalizations are made. Setting effects may occur by the very act of studying a group, hence constructs may not be comparable across settings because they may be context specific. "When the construct is a function of observer-setting interaction, it may be treated as equivalent only for groups being observed in a comparable manner, and the interactive dynamics should be identified clearly" (Le Compte & Goetz, p. 52). As well, some settings become "oversaturated" because they are frequently the source of research studies and are likely different from settings that have not received research attention. History is recognized as an external validity threat because cross-site comparisons are ineffective when unique experiences make the groups quite different.

Dobbert (1982) reminds us that validity is relative to the intended goals of a particular research project, the method and instrumentation. In ethnographic research, the primary goal is to discover patterns while understanding the situation from the participants' perspective. "There is always more than one view of any social situation" (p. 261), and human situations are ever changing. He states that three factors influence the perspective of informants: social position in the group, personality, and status and role. Dobbert emphasizes the need for multiple methods to increase validity because more perspectives permit cross-checking of data. For instance, using methods providing permanent data (such as tapes), in addition to interviews, attending cultural ceremonies such as wedding and funerals, and matching data against data collected in similar contexts are some ways to improve validity. Denzin (1978) concurs with the notion of multiple data sources by saying that the "greatest weight is placed on those hypotheses which have withstood the impact of triangulated observations" (p. 107). Fielding and Fielding (1986) support triangulation by the linkage of diverse data, researchers and techniques in order to improve validity.

Lincoln and Guba (1985) bring an interesting perspective to the discussion of validity in naturalistic inquiry. They say that research within the naturalistic paradigm has 14 components that build upon the naturalist axioms in Table I (pp. 39-43).

1. Natural setting.
2. Human instrument (the researcher and respondent).
3. Utilization of tacit knowledge (to learn nuances of multiple realities).
4. Qualitative methods (although not exclusively).
5. Purposive sampling (to uncover the full array of multiple realities).
6. Inductive data analysis.
7. Grounded theory (rather than a priori theory).

8. Emergent design (to allow research design to emerge).
9. Negotiated outcomes (respondents can best understand and interpret the influence of local value patterns).
10. Case study reporting mode.
11. Idiographic interpretation (in terms of particulars of the case rather than nomothetically in terms of lawlike generalizations).
12. Tentative application (of findings due to multiple realities).
13. Focus-determined boundaries (multiple realities define focus of research rather than inquirer preconceptions).
14. Special criteria for trustworthiness (internal and external validity, reliability, and objectivity).

Lincoln and Guba (1985) say that the usual criteria for internal validity fail because of the multiple realities of naturalistic inquiry, necessitating alternative criteria. Instead, in order to demonstrate "truth value", "credibility" is demonstrated by approval of the constructors of the multiple realities being studied - the informants (p. 296). These authors contrasts threats to internal validity between naturalistic inquiry and quasi-experimental research. They say, "since changes do occur in human instruments" (p. 296), instrumentation is a greater threat to credibility in naturalistic settings. They also say that another threat, statistical regression, does not apply to naturalistic settings unless quantitative tools are used. Finally, maturation and maturation/selection interaction are less threatening in naturalistic inquiry than quasi-experimental research because of long-term interactions between researcher and informants.

Table 1

Axioms of the Naturalist Paradigm

Axioms About:	Naturalist Paradigm
Nature of reality	Realities are multiple
Relationship of knower known	Knower and known are interactive and to inseperable
Generalization	Only time-and context-bound working hypothesis (idiographic statements) are posible
Causal linkages	Entities are in a state of mutual shaping – imposible to distiguish causes from effects
Role of values	Inquiry is value-bound

Adapted from: Lincon, Y. & Guba, E. (1985). *Naturalistic Inquiry*. Beverly Hills: Sage Publications, p. 37.

Lincoln and Guba (1985) write about transferability as opposed to external validity. At the heart of transferability is contextual similarity - congruence between contexts. When the original investigator provides "thick description" (p. 359), that is, a comprehensive base of information, judgement about transferability can be made. However, in many cases, data collected in a particular context has meaning only for that context at that particular time. By using purposeful sampling, as much information as possible will be included in the "thick description" by the naturalistic researcher to provide data for transferability determination.

Qualitative Methodology

The following section is divided to include perusal of qualitative nursing research textbooks and research reports to view nursing authors' attention to validity.

Qualitative nursing research textbooks

There has been a rising interest in qualitative research in nursing that is reflected in the publication of five textbooks since 1985 (Chenitz & Swanson, 1986; Field & Morse, 1985; Leininger, 1985; Munhall & Oiler, 1986; Parse, Coyne & Smith, 1985) with variable attention to validity.

The focus of Chenitz and Swanson (1986) is grounded theory. These authors give extensive coverage to Cook and Campbell's (1979) concerns about internal and external validity. Even though they state that validity is critical for evaluating research, they suggest that credibility is a better word to use than validity.

Parse et al. (1985) discuss many of the concepts which other authors say lead to validity without naming validity directly. Instead, when they write about evaluation of qualitative research, they name several standards which may be related to validity: substance, clarity and integration. They speak of "validating" (p. 69) as contributing to knowledge of a particular culture using the ethnographic method.

In the textbook by Munhall and Oiler (1986), principles and techniques of phenomenology are discussed. While validity is not named, as in Parse et al. (1985), concepts related to validity are explored. "Attention to subjects' realities", "data gathering procedures...preserve the natural spontaneity of subjects' lived experiences" and "the researcher must recognize that he or she is immersed in the phenomenon of study by virtue of studying it" are examples of attention to truth (p. 80). Rieman (1986), in a chapter of this book speaks of validating themes by referring to original descriptions and by asking the respondents if they agree with the descriptions.

Leininger (1985) addresses validity directly, even though she emphasizes that the same criteria should not be used in qualitative research as in quantitative research. She says that criterion-related validity can be obtained in qualitative research with "congruency, meaning, and syntactical relationships of findings" based upon "knowing and understanding the phenomena" (p. 69). She also states that predictive validity allows prediction of "human lifeways or behaviour" (p. 69). She clearly states the goal of qualitative validity.

Measurement is not the goal; rather, knowing and understanding the phenomena is the goal. Qualitative validity is concerned with confirming the truth or understandings associated with phenomena (p. 68).

Finally, Field and Morse (1985) devote considerable space to their discussion of validity which they relate to Le Compte and Goetz's (1982) article. They define validity in qualitative research as "the extent to which the research findings represent reality" (p. 139). These authors acknowledge the need to attend to validity and review many threats to internal and external validity.

Qualitative nursing research reports

A convenience sample of nine qualitative nursing research reports was chosen, representing ethnography/ethnonursing, grounded theory, and phenomenological studies (Aamodt, 1986; Benoliel, 1983; Boyle, 1984; Drew, 1986; Kus, 1986; Lynch-Sauer, 1985; Moore, 1984; Rieman, 1986; and Stern, 1980). These studies were examined to see if concepts related to validity to the discussion of validity (or its equivalent) as in studies on quantitative research.

All nine studies addressed concepts related to validity. For instance, Stern (1980) discussed selective sampling in her grounded theory study to expand categories until saturation occurs. Drew (1986) referred to the use of the constant comparative method of analysis in phenomenology which compares the content of interviews to previous interviews. Aamodt (1986) talked about repeated interviews of children in her ethnographic/ethnonursing study. For the most part, validity concepts were integrated throughout the research reports rather than discussing them separately in one section. Only Drew's study (1986) devoted a separate section to validity, which also included reliability.

Summary and Conclusion

This paper discusses various types of validity and threats to validity in qualitative research. Additionally, qualitative nursing textbooks and research reports were examined for attention to concepts related to validity. This writer concludes that issues relative to validity are important in qualitative nursing research even though the research problems, goals and application of results are

different than quantitative research. The review of qualitative nursing textbooks and research studies leads this writer to conclude that widespread attention is given to validity concepts. However, the research consumer needs more explicit documentation of this validity effort. Separate sections in research reports, and entire chapters in qualitative nursing research textbooks will document attention to validity and the rigour of the research.

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RÉSUMÉ

Recherche qualitative et validité

Afin d'acquérir une plus grande crédibilité dans les milieux infirmiers, des chercheurs spécialisés en recherche qualitative doivent justifier la rigueur de leur recherche. A cette fin, ils peuvent faire état des mesures prises pour en garantir la validité. Bien que les problèmes, les objectifs et l'application des résultats de la recherche ne sont pas les mêmes en recherche qualitative et en recherche quantitative, la validité demeure importante dans les deux cas.

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These programs have been designed to prepare clinicians and researchers for the expanding function of nursing within the health care delivery system. Preparation for the teaching of nursing or the management of nursing service is also offered.

Admission requirements

Either a Baccalaureate degree in Nursing comparable to B.Sc.(N) or B.N. from McGill; or a Baccalaureate degree comparable to B.A. or B.Sc. offered at McGill (for those with no nursing preparation).

Length of program

Two years for those with nursing degrees;
Three years for non-nurses.

Language of study: English

Further information from:

Associate Director, School of Nursing
Graduate Programs
3506 University Street
Montreal, QC, H3A 2A7

Enquiries regarding **Ph.D. studies**
should also be made to the
Associate Director, Graduate Programs

