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# NURSING PAPERS PERSPECTIVES EN NURSING

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# EDITORIAL

## A Tribute to Lucille Thifault

While authors, reviewers and editors struggle through the writing, critiquing and editing of manuscripts, the real work of a journal is carried out by its Managing Editor. During these past few years we have been fortunate to have had Lucille Thifault in this position. Regrettably, she retired this summer, and already we miss her attention to details and her stringent demands for perfection and order. Over five years, Lucille worked with two editors, many associate editors and many reviewers. She has held together the organization and production of the journal during a period of continual changes in printing technology and publication format.

Her dedication to the viability of *Nursing Papers* was unfailing. She continually sought opportunities to expand the readership and improve the quality of the articles. In addition, she knew most of the subscribers by name and address, and managed a current mailing list with great care. She oversaw the circulation of manuscripts and correspondence among the submitting authors, reviewers and the editor, and was always concerned about overly long delays in getting manuscripts returned.

These are just some of the responsibilities she assumed. In short, Lucille has been the backbone of our journal and we will all miss her and her generous contribution to the publication of *Nursing Papers*. Lucille, we wish you the very best for a happy and healthy retirement. If you find a comma out of place in this editorial, I know you will correct it. Good luck!

Mary Ellen Jeans

# ÉDITORIAL

## Un hommage à Lucille Thifault

Si rédiger, critiquer et annoter des manuscrits demande aux auteurs, aux critiques et aux rédacteurs beaucoup d'efforts, il faut cependant reconnaître que c'est à l'adjointe administrative qu'est confiée la plus lourde tâche. Heureusement pour nous, ces dernières années, Lucille Thifault remplissait ces fonctions. C'est avec regret que nous l'avons vu prendre sa retraite cet été. Dès son travail assidu et son souci de la perfection et de l'ordre nous manquent. Adjointe administrative pendant cinq ans, Lucille Thifault a travaillé avec deux rédacteurs, plusieurs rédacteurs adjoints, et des critiques. Elle a vu à l'organisation et à la production de la revue, surveillant toutes les étapes de la publication en dépit des changements incessants de format et de présentation qui ont marqué son mandat.

Lucille Thifault a fait preuve d'un dévouement sans borne, saisissant toutes les occasions pour attirer de nouveaux lecteurs ou améliorer la qualité des articles. De plus, elle connaissait le nom et l'adresse de la plupart des abonnés et gardait à jour avec beaucoup d'assiduité une liste de correspondants. Elle suivait la circulation des manuscrits, la correspondance avec les auteurs, les critiques et la rédaction et se préoccupait des longs délais qui se produisent si souvent lors de la préparation d'une revue.

Ce ne sont là que quelques exemples des responsabilités qu'elle a assumées. Bref, Lucille Thifault servait de pivot à notre revue; sa présence ainsi que sa participation généreuse à la publication de *Perspectives en nursing* nous manqueront. Ma chère Lucille, à l'occasion de ta retraite, nous te souhaitons santé, bonheur et sérénité. Si tu trouves une virgule mal placée dans cet éditorial, nous comptons sur toi pour la corriger. Bonne chance!

Mary Ellen Jeans

# THE ENVIRONMENTAL LOAD OF CHILDBIRTH SETTINGS: DEVELOPMENT AND TESTING OF A MEASUREMENT TOOL

Ellen D. Hodnett

Numerous studies in environmental psychology have examined the physiological and/or psychological effects of various environments. Examples of such research have included investigations of the neurohormonal effects of selected social and therapeutic environments (Dimascio, Boyd, Greenblatt, & Solomon, 1956; Kiritz & Moos, 1974; Ostfeld & Shekelle, 1967). One characteristic of environments that has received special attention is the "load" of the environment. Mehrabian (1976) has defined "environmental load" as the degree of novelty, complexity and stimulus intensity of an environment. He has described environments as either high-load or low-load settings: high-load settings are novel, complex, high-stimulus settings, while low-load settings are familiar, simple, low-stimulus settings (Mehrabian, 1976, pp. 12-13), and the load of the settings has had demonstrable effects on physiological, cognitive and behavioural functioning (Mehrabian, 1978).

Recently, attention has been paid to the effects of the environment in which women labour and give birth. Alterations in methods of care for women during childbirth, including the increasingly routine use of sophisticated medical interventions (such as electronic fetal monitoring, continuous epidural anaesthesia and intravenous oxytocin), have led to speculation that current North American birth environments can have a negative impact on childbirth outcomes (Norr, Block & Charles, 1977; Richards, 1982). In response to consumer pressure, many hospital labour wards have endeavoured to provide more home-like birthing environments. The redecorated labour rooms are often called "birthing rooms" and are set aside for women who are deemed to be low in obstetrical risk and who desire unmedicated, spontaneous vaginal births.

While there is some evidence that the birthing rooms contribute to positive ratings of their childbirth experiences by the tiny minority of women who labour in them (Klein, 1983; Shaw, 1985), there is little available evidence, to date, concerning the question of whether the environmental load of the labour room influences the physiology and

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psychology of the birth experience. One study of home or hospital birth choosers concluded that the birth environment, in combination with selected psychological attributes of the labouring woman, influenced both length of labour and perceived control during childbirth (Hodnett, 1983). One hypothesis derived from the findings of this study was that efforts directed at decreasing environmental load may effect an improvement in physiological outcomes, such as an improvement in the quality of uterine contractions. In order to test that hypothesis rigorously, a method for quantifying the load of childbirth settings is needed; one which is more precise than the crude low-load (home environment) versus high-load (hospital environment) employed in the aforementioned study.

A validated, objective system of measuring the load of a childbirth setting would make it possible to conduct many diverse, but related, studies on birth environments. Such a measurement tool would permit studies that require the determination of differences in environmental load within settings (e.g. between traditional labour rooms and birthing rooms within a labour and delivery suite). In addition, research could be conducted that would be directed at answering a fundamental question: is it the perceived environment or the environment per se that predicts childbirth outcomes? The investigation described herein represents an initial step in the development of an instrument, the Labour Room Rating Scale (LRRS), to measure the load of a hospital birth setting.

### **Research Questions**

There were three main research questions.

1. Is it possible for women who have recently given birth to rate labour room stimuli, in terms of the degree of their actual or imagined awareness of each stimulus?
2. Are the scores assigned to the stimuli influenced by personal characteristics of the raters; specifically, parity, actual experience with the stimulus and length of time in labour?
3. To what extent is there consensus, in terms of the relative importance of each stimulus?

### **Methods**

The initial step was to identify the stimuli that may be present in labour rooms and of which labouring women may be aware. Each stimulus was considered to be a component of the load of the setting. A list of the stimuli, in the form of a draft of the instrument, was circulated to colleagues

in the Faculty of Nursing and nearby teaching hospitals, and to groups of undergraduate students in maternal-infant nursing. As a result of the comments received, minor modifications were made to the Labour Room Rating Scale (LRRS) and its accompanying instructions.

One issue – whether pleasurable and unpleasant stimuli exert differential effects – had to be addressed, prior to the development of the LRRS. There is considerable debate concerning the conceptualization of stress; some contend that it is the magnitude of the change or readjustment, irrespective of the event's desirability, that is the critical dimension (Holmes & Rahe, 1967; Selye, 1974), while others contend that only events that are appraised as undesirable are important (Lazarus, 1966). There is also debate about whether the environmental stimuli per se have physiological and psychological effects or whether the subjective interpretation of the stimuli as favourable or unfavourable is the critical factor (Kiritz & Moos, 1974).

Several incidents that occurred in a study of home birth choosers (Hodnett, 1983) provided indications that stimuli perceived as favourable had deleterious effects on progress in labour. In each instance, increases in favourable stimuli (e.g. the presence of a large number of invited friends and relatives) were associated with a decrease in the quality of labour; a pattern emerged in which labour "came" and "went" with corresponding decreases and increases in the number of people present. While animal studies have supported the hypothesis that environmental changes influence physiological labour processes (Newton & Newton, 1962), no pertinent research that tested this hypothesis on human subjects was found.

In the LRRS, items were included that could be perceived as favourable, mixed, neutral or unfavourable (depending, to some extent, on the individual and the circumstances). Subjects were asked to score the items according to their actual or imagined awareness of the items, independent of perceived favourability or unfavourability.

The process employed to obtain ratings of the relative degree of awareness of each stimulus was similar, but not identical, to that used by Holmes and Rahe (1967) in the development of the Social Readjustment Rating Scale, and by Volicer in the development of the Hospital Stress Rating Scale (Volicer, 1973, 1974; Volicer & Bohannon, 1975; Volicer & Burns, 1977). The method assumes that individuals are able and willing to assign magnitude to the perceived intensity of physical stimuli.

The instructions for the LRRS differed from the instructions in the two scales above in one important respect. The latter scales instructed raters to base the scores for items on their perceptions of how the "average" person would score the items. Data analysis then involved computing an average of



this average (i.e. a mean score or a mean rank score). When attempts have been made to test the assumption that rating of an event is not influenced by personal experience of the event, such attempts are confounded by the fact that those who have experienced the event have been asked to rate it, not based on their experience, but on their estimates of the "average" person's experience. A fundamental aspect of the LRRS study was whether or not there would be differences in scores that were attributable to selected differences in the raters (including personal experience with the stimulus); therefore, it was important that the ratings would reflect each individual's subjective experience. The instructions were as follows.

The experience of being in labour in a hospital labour room involves new people, procedures, and routines to which an individual woman must adjust. This adjustment can depend in part upon the extent to which the woman is aware of her surroundings while she is in labour, regardless of how desirable or undesirable her surroundings are. Some persons are more aware of their surroundings than others, and not all aspects of the surroundings are equal, in terms of their effects on people. The purpose of this survey is to determine the relative effects of various aspects of being in a hospital labour room.

**Step 1:** Attached is a list of experiences women may have, while in a hospital labour room. You are asked to read each item, and to decide whether or not you have ever experienced the item, e.g. during this recent or any previous labours. Place an "X" in the "Had" or "Did Not Have" column to the left of each item. After you have done this for all of the items, go on to Step 2.

**Step 2:** You are asked to rate each item, regardless of whether you have ever experienced the item, according to how much you were or would have been aware of the item during your recent labour. A score of 100 has been given to item #1. Your awareness of an item may have changed, as your labour progressed. Score the item, according to your average amount of awareness of the item during your labour.

There are no right or wrong answers. Please try to score each item without consulting anyone else. Your impressions are what matter in this survey.

The LRRS was then tested on a convenience sample of 314 postpartum women in two Toronto teaching hospitals. After approval was received from a human subjects ethics review committee and from the hospitals, informed consents were obtained from English-literate women who had spent at least one hour in labour in a hospital labour room. A pilot test of the instrument, using 30 subjects, yielded no problems in comprehension of the instructions

or in ability to complete the instrument; because no changes were necessary, the data from the pilot test were included in the final analyses. When the instructions regarding completion of the instrument were reviewed with the subjects, each was reminded that she should complete the items solely in terms of her own perceptions. The original LRRS consisted of 29 items (Table 1). Subjects were asked to indicate, beside each item, whether or not they had experienced the item. In addition, they responded to questions about parity, prior experiences as hospital patients, labour length, length of time spent in the labour room and numbers of familiar and unfamiliar people who were with them during labour.

### Data Analysis

The level of statistical significance was set at  $p < .05$ . The data were analyzed as follows, using the statistical programs described in the SPSSx User's Guide (1983). Means, ranges and standard deviations were computed. Outlier scores, defined as scores greater than three standard deviations from the mean, were dropped from further analyses; the descriptive statistics were then re-computed. Comparisons between the mean scores of the raters in one hospital and those in the other hospital, using Students  $t$  tests, yielded non-significant differences; this allowed the data from the two settings to be combined. Students  $t$  tests were then employed to compare the mean scores on each item of the following subgroups: primigravidas and multigravidas, those with and without previous hospitalizations and those who had actually experienced each item versus those who had not experienced the item. Pearson correlations were computed, to determine if relationships existed between the magnitude of the item scores and the following variables: length of labour, length of time spent in the labour room and numbers of familiar and unfamiliar people present. Finally, Kendall's Coefficient of Concordance yielded mean rank scores for the items, and the  $w$  statistic provided an indication of the degree of consensus in the sample with respect to their relative awareness of each item.

### Findings

Of 314 respondents, 142 were primigravidas and 172, multigravidas; 184 had been hospitalized before, for reasons other than childbirth. The mean length of time spent in the labour room was 7.77 hours, range = 46, SD = 6.39. Parity did not appear to influence item scores. On all items, there was a non-significant difference between the mean scores of primigravidas and multigravidas. Similarly, previous experience in a hospital labour room did not influence magnitude of scores. Prior non-obstetrical hospitalization influenced only the scores assigned to "outside windows" and "being shaved". In both instances, subjects who had been hospitalized previously tended to assign higher scores to the items.

In general, labour length and length of time spent in the labour room did not influence item scores significantly. There were a few exceptions, however. There were weak but significant inverse relationships between labour length and (a) "other hospital sounds" ( $r = -.1067$ ,  $p < .04$ ), and (b) "presence of other equipment" ( $r = -.1119$ ,  $p < .03$ ); and between length of time spent in the labour room and "unfamiliar bed" ( $r = -.1359$ ,  $p < .02$ ), "unfamiliar surroundings" ( $r = -.1028$ ,  $p < .05$ ), and "bright lights" ( $r = -.1562$ ,  $p < .004$ ).

**Table 1**

*The 29 Items in the Original LRRS*

- 
1. The colour and decor of the labour room<sup>a</sup>
  2. Being in an unfamiliar bed
  3. Unfamiliar surroundings
  4. Bright lights in the labour room
  5. Being in a very warm or very cool labour room
  6. Being in a very large or very small labour room
  7. Being in a labour room without outside windows
  8. Odors
  9. The presence of unfamiliar hospital staff – physicians, nurses, students, housekeeping, etc.
  10. Sounds made by hospital staff outside the labour room
  11. Having another labouring woman share the same room with me
  12. Sounds made by other women in labour
  13. Incoming personal telephone calls
  14. Music
  15. Other hospital sounds
  16. Restrictions in where I was permitted to be while in labour (such as bedrest only, or allowed in chair but not in hallway)
  17. Restrictions in what positions I was allowed to assume while in the labour bed
  18. Having an "I.V." with medication in it to induce or speed up labour
  20. Having a fetal monitor on
  21. The presence of other medical equipment, such as oxygen and suction equipment, in the labour room
  22. Vaginal examinations
  23. Rectal examinations
  24. Having my "water broken" by a physician
  25. Having an enema
  26. Being shaved
  27. Receiving oxygen during labour
  28. Continuous epidural anaesthesia
  29. The presence of familiar people in the labour room, such as my husband, friends, relatives, personal physician
- 

<sup>a</sup> The anchor item, with a pre-assigned score of 100



Table 2

*Effects of Personal Experience with the Stimulus on Item Scores in the LRRS*

Item	Significant Positive Effect		
	Yes	No	Effect not known <sup>a</sup>
Labour Room decor			x (anchor item)
Unfamiliar bed	x		
Unfamiliar surroundings	x		
Bright lights	x		
Warm/cool room	x		
Large/small room	x		
No outside windows	x		
Odors	x		
Unfamiliar staff			x
Sounds by staff			x
Another patient sharing labour room			x
Sounds made by other labouring woman	x		
Telephone calls			x
Music			x
Other hospital sounds	x		
Restrictions in where subject could go		x	
Restrictions in position	x		
"Plain" I.V.	x		
I.V. with oxytocin	x		
Fetal monitoring	x		
Presence of other equipment	x		
Vaginal exams	x		
Rectal exams			x
Amniotomy	x		
Enema		x	
Perineal shave		x	
Receiving oxygen	x		
Epidural anaesthesia	x		
Presence of familiar people			x

<sup>a</sup> For 5 items, less than 12% of the sample experienced the item, and therefore statistical comparisons were not valid. The two items concerning presence of unfamiliar or familiar people were experienced by all subjects, as was the anchor item.

Personal experience with the stimulus did have a significant influence on 18 items. In each instance, the group who had experienced the stimulus had a higher mean score for the item than the group who had not experienced the stimulus (Table 2). There were only three items – enema, perineal shave and restrictions in where the subject was permitted to be during labour – in which personal experience had a non-significant influence. In the remaining items, the numbers in either the "did experience" or "did not experience" group were too small for valid comparisons. For example, approximately four per cent of the subjects shared a room with another labouring woman ( $n = 12$ ), ten per cent underwent rectal examinations ( $n = 33$ ), while 11 per cent heard music during labour ( $n = 37$ ). Because of the influence of personal experience on the other item scores, the five items that were experienced by fewer than 40 subjects were dropped from further analyses. For the sake of consistency, all final mean scores were calculated on the scores of those who actually experienced the items.

Additional analyses of the data yielded further evidence that experience with a stimulus resulted in improved ability to score the stimulus. Initially, on 14 items, between 14% and 28% of the total sample assigned a score of 100 to the item. Because 100 was the preassigned score to the "anchor" item, this finding suggests that these subjects were unable to differentiate among some items. When the scores of subjects who did not experience the items were removed, all scores of zero and nearly all scores of 100 were thereby eliminated.

In addition to the five items that were dropped from the final scale, because too few subjects had had personal experience with the stimulus, two other items were also eliminated. The two items were the only two that were not inanimate: "presence of familiar people" and "presence of unfamiliar people". There was a significant positive correlation between the number of unfamiliar people and the magnitude of the corresponding item score ( $r = .1444$ ,  $p < .007$ ). Thus, a mean score would not be an accurate reflection of the impact of this stimulus. In contrast, all subjects had at least one familiar person with them during labour, but very few ( $n = 5$ ) had more than two. Therefore, it was impossible to determine to what extent larger numbers of familiar people would influence item scores.

The revised LRRS consisted of the 22 items, including the anchor item, that were experienced by the majority of the sample and for which a mean score was a valid indication of relative impact. Table 3 lists the 22 items, in descending order of magnitude, with obtained mean scores and mean rank scores of the subjects who experienced the items. When Kendall's Coefficient was computed, the results indicated a significant level of agreement among the subjects on their relative awareness of the items ( $w = .1924$ ,  $p < .0001$ ). In other words, regardless of variations in the magnitude

Table 3

*Mean Scores and Mean Rank Scores of the 22-item Revised LRRS*

Item	No. Who Experienced it	Mean <sup>a</sup>	Mean Rank <sup>a</sup>
Continuous epidural anaesthesia	139	308	17.98
Having a fetal monitor on	267	245	19.06
Having an "I.V." with medication in it to induce or speed up labour	124	232	16.83
Having my "water broken" by a physician	170	231	16.55
Vaginal examinations	299	227	19.09
Sounds made by other women in labour	206	226	16.95
Restrictions in what positions I was allowed to assume while in the labour bed	137	222	17.55
Receiving oxygen	109	215	15.02
Having an "I.V." without medication in it	126	193	14.93
Restrictions in where I was permitted to be while in labour	127	185	14.50
Having an enema	92	178	15.72
Being shaved	86	151	14.40
Being in a very small or very large room	172	146	12.32
Bright lights in the labour room	112	141	12.46
Odors	66	140	10.26
Being in a very warm or very cool labour room	125	131	13.73
The presence of other medical equipment, such as oxygen and suction	183	127	11.47
Being in a labour room without outside windows	202	109	11.24
Unfamiliar surroundings	230	106	11.72
The colour and decor of the labour room <sup>b</sup>	314	(100)	n/a
Other hospital sounds	188	94	9.39
Being in an unfamiliar bed	229	93	9.75

<sup>a</sup> All means and mean ranks were calculated from the scores of those who actually experienced the stimuli, and means were rounded to the nearest whole number.

<sup>b</sup> The anchor item: because score was pre-assigned, means and mean ranks

of the scores they assigned, subjects tended to experience the same relative degree of awareness of the items.

On examination, the 12 items with the highest mean scores differ from the 10 with the lowest mean scores. Of the top 12, eleven involve either restraints, restrictions in movement, or physical intrusiveness. In contrast, all of the ten lowest-scoring items are unintrusive stimuli.

## Discussion

Of particular interest is the finding that experience with a stimulus had a significant positive influence on the magnitude of the assigned score. One of the criticisms of the conclusions reached in life change research has been that the highest-weighted events are the rarest events (Zimmerman, 1983). This is not the case with the LRRS. The highest-weighted stimuli are very common ones in the hospitals used for data collection. For example, in the study sample, 44% had continuous epidurals, 85% had electronic fetal monitoring, 54% had amniotomies and 39% had intravenous oxytocin during labour. Similar results were obtained in a recent Toronto study of low-risk childbearing women (Hodnett, 1983). The 29 original items were ones with which all or most of the sample would be familiar prior to labour. They were either common environmental stimuli or common obstetrical procedures which are discussed in prenatal classes, the mass media, the lay childbirth literature and in physicians' offices. Nevertheless, direct personal experience had a significant impact on the mean scores of the majority of the items. This finding is contrary to that of previous researchers (Holmes & Rahe, 1967; Volicer, 1973, 1974; Volicer & Bohannon, 1975; Volicer & Burns, 1977).

The instructions for completion of the instrument in the present investigation may have influenced these results. In the previous studies using this method, subjects were asked to score the items, according to how the "average" person would score them. Thus an individual's scores may have reflected perceptions of the average between those who had and had not experienced each stimulus. In the present study, because ratings were based solely on self-perception, differences between those who experienced and those who did not were more readily detected.

Physical intrusiveness seems to be a major factor in degree of awareness of a stimulus during labour. However, high scoring of certain items may have been influenced by the reason for their usage; subjects' awareness may have been influenced by the rationale they were given for having the procedure. For example, while electronic fetal monitoring is often administered as a routine practice in the two hospitals used for data collection, oxygen therapy and intravenous oxytocics are usually employed

only when complications arise. Knowledge that a complication has arisen may increase anxiety and increase the subject's attention to the stimulus.

The issue of the meaning of the stimulus to the individual, including the extent to which it is perceived as desirable or undesirable, remains unresolved. The Holmes and Rahe (1967) model predicts that both positive and negative events are associated with an increased probability of illness. Nevertheless, subsequent research is nearly unanimous in finding that, when a list of events is separated into subscales of positive and negative items, the undesirable events are more strongly related to physical and psychological pathology. The latter finding is consistent across varied subject samples, dependent variables and life event measures (Mueller, Edwards & Yarvis, 1977a, 1977b; Vinokur & Selzer, 1975). All items of the "final" LRRS (with the possible exception of the anchor item) can be considered to have at least a partially negative impact.

The undesirable or physically intrusive items may receive higher scores because of the greater amount of adaptation required by the individual. However, determining the desirability or undesirability of an event is not always clear-cut. For example, a vaginal examination may be uncomfortable and embarrassing, but it may be requested by the labouring woman because of her desire to know if labour is progressing satisfactorily. If the results indicate significant progress has been made, she will feel relief and renewed confidence. Similarly, electronic fetal monitoring has been shown in many studies (Butani & Hodnett, 1980; Shields, 1969; Starkman, 1976) to produce ambivalent reactions in subjects. Confidence that the fetus is not distressed may be coupled with physical discomfort because of restrictions in mobility or episodes of fear and anxiety when the fetal heart rate is "lost" when equipment malfunctions. Future tests of the instrument should include examinations of each item, in terms of the extent of its subjective desirability for each subject.

There is an unresolved debate in the life events research literature, concerning the use of subjectively-weighted versus consensually-derived item scores. A parallel question arises in childbirth events research. The issue that should be addressed next is whether environmental load can be scored "objectively" via consensual validation, which results in magnitudes assigned to each stimulus, to be used in subsequent research, or whether environmental load must be subjectively determined by each individual. Previous research has demonstrated that stimulus screening ability is a stable personality trait, describing an individual's ability to attend to environmental stimuli selectively (Mehrabian, 1978), and that stimulus screening is a predictor of childbirth outcomes (Hodnett, 1983). The obvious question is: Is awareness of an event related to stimulus screening ability? In other words, do non-screeners (those who react acutely to environmental



stimuli) score childbirth stimuli higher than screeners? A study of the relationship between stimulus screening ability and LRRS item scores would shed light on this question.

Regardless of the outcome of such investigations, there are serious methodological obstacles to be overcome before research that links environmental load and childbirth outcomes can be undertaken. At present, there are many confounding variables that must be considered. For example, two of the highest-scoring items involve medications (oxytocics and epidural anaesthetics) that can result in obstetric complications and influence length of labour. As previously noted, other top-scoring procedures may be instituted as a result of the onset of complications. For the present time, the LRRS should be tested further on samples of low-risk women who experience uncomplicated labours, and for whom the procedures are employed for reasons other than maternal or fetal risk factors. Consideration of suitable outcome measures in such research must involve a careful scrutiny for potential confounding variables and rigorous efforts to control for these.

Furthermore, the issue of the impact of familiar and unfamiliar people remains unresolved; yet, this is a critical dimension of the birth environment, for both patients and caregivers. While the other environmental stimuli can be conceptualized as having a unidirectional influence (they have an impact on the labouring woman and not vice versa), the presence of other people invariably involves reciprocal interactions between the woman and the people with her – she influences them, and they, her. Thus, their impact on her may be mediated by many interpersonal factors. Further research is necessary before conclusions can be reached about the relative impact of human beings on environmental load.

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## RÉSUMÉ

### **L'influence environnementale dans les milieux d'accouchement: Le développement et l'épreuve d'un instrument**

Les récentes tentatives d'humaniser les milieux d'accouchement étaient fondées sur l'hypothèse que la nature du milieu exerce un effet sur l'issue de l'accouchement. Toutefois, on sait peu de choses sur les caractéristiques de ce milieu qui permettent de prédire l'issue psychosociale ou physiologique d'un accouchement. Les études de psychologie de l'environnement donnent à penser que le fardeau environnemental d'un cadre influe sur les processus autonomes et cognitifs. Une étude a été effectuée dans le dessein d'élaborer un instrument, l'échelle d'évaluation de la salle d'accouchement, lequel permet de mesurer le fardeau environnemental des milieux d'accouchement. Il en ressort qu'il faut régler d'importants problèmes de méthodologie avant de pouvoir réaliser des études qui déterminent l'incidence du fardeau environnemental sur l'issue d'un accouchement.

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# THE PROBLEM-BASED LEARNING APPROACH IN BACCALAUREATE NURSING EDUCATION: HOW EFFECTIVE IS IT?

Kathryn E. Lewis . Robyn M. Tamblyn

Despite the fact that students frequently express dissatisfaction with the didactic lecture method, many baccalaureate nursing programs depend on this format as a comfortable and fair way to meet the varied learning needs of individual students. Thus, students are encouraged to sit passively and absorb knowledge. Occasionally a question may be addressed by lecturer or student, but with the breadth and depth of information to be covered, time is very limited. A specific case study to which to apply the new found concepts, may or may not be used. Given these circumstances, should faculty members then be surprised at high levels of class absenteeism, poor retention of class content, poor levels of applicability to practice situations and poor performance on tests and examinations?

The researchers' previous knowledge of the problem-based learning method led them to question whether this concept could be applied to a baccalaureate nursing curriculum as a viable alternative to the traditional lecture.

The question that arose from this idea was: If students independently pursued the nursing solutions to actual patient problems in case studies and met in small groups with a teacher/facilitator to discuss their newly formed concepts, would their theoretical level or their ability to solve problems (carry out the nursing process) be substantially different than those of students taught in the traditional lecture format?

The hypotheses that emerged from the previous question were:

1. There would be no difference in knowledge gain between a group of students exposed to the problem-based learning method (experimental group) and one exposed to the traditional lecture method (control group).
2. There would be no difference between the experimental and the control groups in relation to their improvements in problem-solving ability either a) overall or b) specific sub-skills (i.e., assess, plan, implement and evaluate) as demonstrated in the clinical practice (hospital) setting.

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## Literature Review

Munro (1982) equated the problem-solving process with the nursing process and the decision-making process. She went on to cite Schaeffer (1974) who showed the relationship between the steps of the decision-making process and the steps of the nursing process – assessment, planning, implementing and evaluating. Munro, herself, tested the problem-solving abilities of baccalaureate nursing students via written simulations. She found that individual differences in problem-solving competencies could be measured by this means.

Barrows and Tamblyn (1980) describe the problem-based learning mode and the "clinical reasoning process" that has been successfully used to develop the diagnostic abilities of medical students. Small group tutorials allow the teacher to act as stimulator and facilitator for the students who have independently researched a problem.

Schmidt (1983) cited work by Boshuizen and Claessen (1981) who compared medical students from conventional and problem-based learning curricula on a diagnostic task. Those students in the latter group were found to have slightly higher, but reliable, differences in their problem-solving abilities.

Jones, Bieber, Echt, Scheifley and Ways (1984) compared medical students from a conventional curriculum with those from a problem-based curriculum over a ten-year period. No significant differences were found in their performance results on National Board examinations or in results of clerkship and residency training.

Gentine (1980) found that after initial discomfort with portable self-learning packages, nursing students eventually found the method an effective and pleasant way to meet individual learning needs in a time-restricted environment. These learning packages included: title, purpose, learning objectives, learning strategies (sequence) review and evaluation. Mackie (1973), compared the lecture method with a student-centered educational process and found a much higher student satisfaction level with the latter format. Paduano (1979) disproved the idea that only superior students benefit from independent study experiences. Failing students "contracted" to write their individual course objectives and worked independently with occasional assistance from their instructor. They were able to complete the course requirements well within the four-week limit feeling confident and enthusiastic about their success. Spencer (1979) utilized three teaching methods – lecture, tape-slide package, and guided study and textbooks – in her comparative study in a British nursing diploma program. She found that the intelligence level of the students was related to the type of learning

format they found most useful. The academically sound students performed better with self-instructional techniques than in a lecture format. The students with the lowest academic ability did best with the lecture method and the average achievers remained so, regardless of the instructional methods. However, the lecture method was the most popular across the groups. The small student number – six per group – imposes limits to the credibility of these results. Thompson's (1972) modular autotutorial approach to nursing education gained student support after an initial period of resistance. However, "no significant difference in learning retention between students who used autotutorial independent study and those who had traditional lectures", was found.

## **Method**

### ***Population***

The entire senior class in a baccalaureate nursing program was included in the study. The random allocation of the 48 students to either the Fall or Spring term or to the experimental or control group for the course, "Care of the Acutely Ill Adult", was beyond the control of the researchers. To meet the requirements of the Ethical Review Board student participation in the experimental group was strictly on a voluntary basis, but the student response proved to be more than adequate. In fact, to maintain an even number per group, five students had to remain in the lecture control group despite their request for the tutorial group. However, it must be noted that except for the five students mentioned above, those in the lecture group were there as their first choice as well. Several students were lost from the study as they requested transfer or missed one of the pre- or post-tests. Thus, the final experimental group contained 22 students, and the final control group, 20, with each group containing one post-registered nurse (RN) student. Although individual student progress was monitored, anonymity was assured by limiting the reporting to group results.

### ***Background***

The senior students had common background experiences in care of the adult patient as follows: First year – 170 hours; Second year – 130 hours; Third year – 28 hours for a total of 328 hours.

The senior one-term course, "Care of the Acutely Ill Adult", was designed to culminate their experiences by providing 288 hours of clinical practice on a variety of adult medical- and surgical-care units. Forty-eight lecture hours in this same course covered topics such as the acutely ill patient with hypoxia/hypercapnea, cardiac ischemia, fluid and electrolyte imbalance and complications of surgical intervention. Other topics covered were relatively new to the students such as blood disorders, metabolic and endocrine

imbalances, sudden traumatic immobility and disorders of neurological origin. Thus, approximately, 50 percent of the content built on previous lecture content and the remainder was relatively new.

### *Variables*

The independent variables in the study were the two types of learning formats to which the groups were exposed. The control group in each term attended the regular four hours of class each week in which each of the three instructors gave didactic style lectures. Thirteen adult acute care content areas were covered in depth. A small amount of student-teacher interaction occurred as questions were occasionally posed by both sides. Instructor #3 also conducted the weekly clinical conferences for this group. The students in the experimental group in each term were given a learning package for each of the topics one week before it was due to be covered in class for the control group. Each of their 13 learning packages included a patient case study relevant to the topic, a bibliography and printed material.

After the students had examined and analysed the case studies and had done their readings, they met to discuss and share their findings. For this purpose they were divided into two tutorial groups, with instructors #1 and #2 respectively. The student group remained constant over the term but the two instructors switched places midway so as to control for instructor effect. The instructors facilitated discussion of the case study and offered direction when necessary. It was intended that the instructor not answer the questions for the students.

Aspects of the course that the two groups shared in common were: course objectives, bibliography, lecture outlines, access to the self-instructional audio-visual laboratory, the university library and the hospital library. The timing and sequence of the topics were kept constant for the two groups. This ensured that the experimental group would be prepared for their weekly tutorials. Also, it would ensure that both groups had an equal exposure to theory for their clinical experience. Similarities in the clinical setting included three consecutive days per week of practice on adult care units, the same three instructors for clinical supervision, and a midway and a final clinical evaluation.

In an attempt control for the independent variable of previous knowledge and experience, the experimental and control groups were matched as closely as possible for ability as indicated by their grade point averages from the previous year. The group means of their marks were 69.3364 and 68.3725 respectively. One-way analysis of variance found no significant difference between the groups at the  $p < .05$  level.



The dependent variables in this study were the score differences between the pre- and post-testing on a) the written multiple choice examination; b) the clinical performance evaluation. Students attitudes and opinions regarding the course and their teaching/learning method, were pre- and post-tested using a multiple-choice opinion questionnaire.

The cost of implementing each of the two teaching methods was estimated by each of the three instructors with regard to time spent in preparing lectures and learning packages as well as to printing costs.

### ***Instruments***

The theoretical knowledge gain was measured by a 100-question multiple-choice examination that covered the 13 topics of the acute care course. Prepared by the researchers, a constant ratio of number of questions per hour of lecture was maintained for the four matched exams. The experimental and control groups of each term were pre-tested and post-tested for theoretical knowledge. The post-testing in each term doubled as a final examination for the course and was worth 30 percent of the final mark.

The students clinical performance was measured by continuous weekly sampling of their behaviour in the hospital setting. A standardized evaluation form was based on the nursing problem-solving process with its related course objectives. The form permitted both quality and quantity ratings. The sub-categories of the form together with weekly ratings allowed for both partial and total scoring of both sub-category and overall clinical performance. Both the experimental and control groups were equally exposed to three clinical instructors who facilitated, taught and evaluated students clinical skills. No attempt was made to control for the order of this exposure.

### ***Data analysis***

The score differences between the pre- and post-tests for a) theoretical and b) nursing process skills for the experimental and control groups were subjected to Analysis of Variance. A two-tailed *t*-test with a significant *p* value of  $< .05$  was used to compare the theory score changes. One-way analysis of variance with a significant *p* value of  $< .05$  was used to compare the clinical score changes.

### ***Findings***

When the score differences between the knowledge pre-test and post-test were subjected to Analysis of Variance technique using a two-tailed *t*-test, there was a *p* value of 0.479 which was not significant at the .05 level.

Thus, there was no difference in knowledge gain between the group of students in the problem-based learning/tutorial group and those in the traditional lecture group.

Nursing process application skills were measured by the standardized clinical evaluation forms. When comparing the two student groups on the basis of their overall clinical summative scores the results again were not statistically significant at a  $p$  value of .2256 using one way Analysis of Variance technique (see Table 1).

**Table 1**

***Comparison of Group Mean End-Scores:  
Teaching, Counselling, and Overall***

Clinical Category	Experimental Group	Control Group	$p$ values
Overall	77.3955	79.7950	.2256
Teaching	77.6273	76.5400	.6834
Counselling	67.1409	70.6350	.3547

Comparisons of the differences between the pre-and post-testing of clinical sub-skills showed the following results.

1) Assessment skills: The lecture control group showed growth in clinical assessment skills which was greater than that of the experimental group. This difference was statistically significant at the  $p < .05$  level (see Table 2).

2) Planning: Adequate data was not available to measure this sub-skill.

3) Implementing: Growth in implementing skills were greatest in the lecture/control group but the difference was not statistically significant (see Table 2).

4) Charting skills: The lecture/control group showed more gain in charting skills than their counterparts but this difference was not significant at the  $p < .05$  level (see Table 2).

5) Teaching skills: In a comparison of summative scores in the area of teaching skills, the problem-based learning/tutorial group outperformed the control group but the difference was not statistically significant (see Table 1).

6) Counselling skills: In a comparison of summative scores of counselling skills the lecture/control group outperformed the experimental group but the difference was not significant at the  $p < .05$  level (see Table 1).

7) Evaluation skills: The lecture/control group also achieved more growth in evaluation skills than their experimental counterparts but the difference was not significant (see Table 2).

**Table 2**

***Comparison of Group Mean Difference Between Pre- and Post-Scores in Clinical Evaluation***

Clinical Category	Experimental Group	Control Group	p values
Assessment	5.9773	13.3650	.0433*
Implementing	9.1364	12.9850	.3481
Charting	14.8545	7.8900	.2162
Evaluation	3.4818	12.9850	.0721

Note: \*Values statistically significant at the  $p < .05$  level.

***Limitations***

Five of the students in the lecture group had chosen the problem-based learning/tutorial format but had to remain in the lecture group to keep the numbers even. However, all but one had also indicated that they would be content in either group.

The measurement of problem-solving abilities in this paper is limited to the students' abilities to apply the nursing process and its component skills in the clinical setting. Adequate data was not available for planning skills.

## Discussion

The multiple-choice questionnaire did not register knowledge change to the degree expected by the researchers. The range of change between the pre- and post-testings varied from two to 26 out of a total score of 100. Possible explanations for this phenomenon could be that the items were too difficult, the students gained only limited knowledge from the course, the test did not measure the true knowledge gained, the four matched exams had poor inter-reliability or that the students had difficulty with the multiple-choice format.

The use of a student's nursing process accomplishments in the clinical field to measure problem-solving abilities clearly has limitations. The difficulties of separating extraneous factors from a student's individual ability in a patient problem situation, standardization of patient situations and objectivity of faculty evaluations are but a few.

However, the overall results of the study indicate that the type of teaching/learning method used did not significantly alter the measureable outcome scores of the participants. These findings reflect those of Jones et al. (1984) and echo the synopsis by Newble (1985) who states that although "the problem-based approach offers an attractive alternative to the traditional approach... it is yet to be proved that the outcome is significantly different" (p. 118).

Although the findings support the null hypothesis put forth by the researchers, they were somewhat disappointing in view of the following reports of effectiveness and satisfaction with the problem-based learning style and tutorial format.

Twenty-two of the original 24 students who requested the problem-based learning/tutorial group remained with the group. Ninety-one percent reported they were glad they had chosen the tutorial format. Sixty-eight percent of the experimental group recommended future use of the format for interested individuals only. About twenty-three percent recommended its use for all fourth year students and eighteen percent for use with post RN students.

Of the 20 students who were exposed to the lecture format, 65 percent reported they were glad they had stayed with this conventional style and 90 percent found pleasure in learning in this way. One student who had previously requested the tutorial track reported slight displeasure with the lecture track. Also, 75 percent reported that they would like to have experienced the problem-based learning/tutorial format to see if it suited them.



Of the 22 students in the problem-based learning group, 77 percent of them reported that they learned more willingly, more enjoyably and in more depth than they previously had in lecture format courses. Seventy-three percent reported that they felt they learned more but 68 percent felt the learning style was harder than in the lecture format.

Still, one must ponder why this group did not perform significantly better than the lecture group on any of the scores. Doubts may be cast in the direction of the measurement tools and methods. However, as a point of interest, there was no significant difference between the groups on their national registration exam scores. One must also take into consideration the powerful learning experience of clinical practice which was common to the two groups. Munro (1982) cited De Tornyay (1967) who showed that although a group of students that had been involved in discovery learning obtained better problem-solving scores than a group with didactic teaching, their concurrent clinical experience "appeared to reduce score differences to non-significant levels" (p. 39).

However, other researchers (Jones et al., 1984; Schmidt, 1983) tended to view these "no difference" results as positive in that the problem-based learning approach was at least as good as conventional formats.

In addition to the aforementioned data, the financial cost and instructor preparation time for each of the methods was recorded for the year. There proved to be no significant difference between the two modes.

## Conclusion

The results of this study on learning showed that there was no significant difference in measureable theoretical or problem-solving outcomes between a group of senior baccalaureate nursing students who voluntarily participated in a problem-based learning/tutorial format and their counterparts who voluntarily remained in the traditional lecture format.

Although cost and preparation time on the part of the instructors was not a significant issue, the pleasure that both groups obtained from their respective learning formats supplements the belief that individual learning styles of students should be taken into consideration by their instructors. Problem-based learning utilizing case studies and small-group tutorials remains a viable alternative to conventional learning modes.

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## RÉSUMÉ

### **L'enseignement axé sur la résolution de problèmes dans les études menant au baccalauréat universitaire: Est-il efficace?**

Dans cette étude, deux groupes comparables d'étudiants en dernière année de baccalauréat en nursing ont été exposés à deux types de méthodes pédagogiques, le groupe expérimental à un enseignement privé axé sur la résolution de problèmes et le groupe témoin à un enseignement de type classique basé sur les cours magistraux. On a mesuré avant et après le cours le niveau de leurs compétences en ce qui concerne la résolution de problèmes d'ordre théorique et clinique. On a analysé la comparaison des progrès réalisés par les deux groupes au moyen de l'analyse de variance avec un seuil de signification fixé à  $p < ,05$ . On a constaté que la seule différence notable entre les deux groupes sur le plan statistique avait trait aux aptitudes d'évaluation en milieu clinique, où c'est le groupe témoin qui a fait les plus grands progrès.

# THE MEANING OF HEALTH IN AN INNER CITY COMMUNITY

Janice M. Morse

[Yeh...so tell me what health is?] Health – I should've looked this up in the dictionary and give you a definition! [No way! I want to know what you think it is – 'cos everyone thinks it's something else – and it's okay what you think.]

In spite of the increasing numbers of articles defining, analyzing and explaining the concept of health, there is little agreement among professionals as to what health actually is (Payne, 1983; Smith, 1983; Van der Geest, 1985; Winstead-Fry, 1980). This gap is becoming increasingly awkward with the World Health Organization's new goal of "health for all by the year 2000." The question is, if we do not know or cannot agree what health is and if health cannot be operationalized, then how can "health for all" be attained?

This vagueness is disconcerting when health professionals are given the task of promoting and maintaining health, as well as caring for the sick. It is clear from the literature that lay persons (i.e., consumers of health care) also have divergent notions of what health is and that these perceptions of health frequently differ from the health care providers' definitions (Baumann, 1961; Maddox, 1962; Shaver, 1985; Smith, 1983; Tessler & Mechanic, 1978; Tripp-Reimer, 1984). It is also apparent that health care providers ethnocentrically assume that they are the "experts", and it is their responsibility, and privilege, to inform the consumers on matters pertaining to their state of health. After reviewing published definitions of health, Keller (1981) concluded her article with this assumption:

Consumers at present are unable to identify what their ultimate goal for health might be and for what they should hold health care professionals accountable.

The purpose of this research was to elicit the emic perspective of health from persons using anthropological methods of unstructured interviewing techniques. A model was then developed, and the relationships between

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variables were tested. In the last section of this paper, questions and hypotheses arising from these data are presented for further research and the refinement of the model, and the lay perceptions of health are compared with definitions of professionals.

### **Literature Review**

In spite of numerous attempts to define health and the existence of a multiplicity of definitions (Keller, 1981), a concise, operational definition of health is still lacking. The flexible and loose use of the term "health" has resulted in ambiguity and vagueness (Cardus, 1973; Dolfman, 1974; Kottow, 1980) and multiple meanings have caused gaps, conflicting priorities in programs and confusion for the consumer (Keller, 1981).

The epistemological assumptions in many definitions of health have been analyzed to clarify the differences in meaning. Blum (Schelenger, 1976) has identified seven major perspectives inherent in definitions of health.

- The medical perspective, focussing on the detection and alleviation of disease.
- The public health perspective, focussing on the prevention of disease, rather than curing the disease.
- The humanitarian perspective, in which man and his optimal well-being are of primary importance.
- The economic perspective, of which the prime aim is to reduce productivity losses.
- An adaptive perspective, or the optimal fit of man to the environment.
- A philosophic view, or the realization and attainment of maximal potential.
- The ecological perspective, or the interaction of man and the environmental ecosystem.

There are also different components of the concept of health. For example, Boorse's (1977) definition suggests that health may be considered a physical state: "Health is a biological function and statistical normalcy." Others may consider health to be a physiological and psychological concept. The World Health Organization's 1947 definition fits into the last group: "Health is a state of complete physical, mental and social well-being, not merely the absence of disease or infirmity." Occasionally spiritual health is added to these domains: "Health is man's best physical, mental and spiritual expression in building an efficient society" (Goodrich, 1932).

The method by which health is attained is also reflected within definitions of health. For example, Illich (1976) stated that health is a personal task, which results "from self-awareness, self-discipline and inner

resources. . . ." As well as individual responsibility, he noted that health is also a relative state, culturally defined and varying according to the belief systems between cultures.

Fox (1977) noted that the notion of "quality of life" is often used synonymously with health. This practice enables the political correction of societal injustices by the justification of therapeutic rather than punitive measures. Thus, health is viewed as an "ideal" societal state beyond the direct control of the individual.

Finally, health may be regarded as a holistic, inclusive state within a domain so vast that the individual responsibility for health is minimized or removed. Knight (1974, p. 247) defined health as "harmonious integration of the person within himself and within his society, nature and cosmos." This concept of health makes it a state largely endowed upon the passive individual depending on his or her position in this vast realm.

Many authors have noted that a discussion on health inevitably involves a discussion of illness and disease. Noting the discrepancy between the scientific or the objective (i.e., etic) and lay or subjective (i.e., the emic) definitions of health, Tripp-Reimer (1984) presented a model that accommodates both the etic and emic perspectives on disease – non-disease and wellness – illness dimensions. The model contains quadrants. Two of the quadrants are agreements between the provider and the client (self-report of health and absence of pathology, or illness and pathology), and the other two quadrants are discrepancies between the provider and the client (i.e., illness and absence of pathology, or pathology and absence of illness).

Few researchers have examined correlates of perceived health status among lay persons. In 1961, Baumann examined conceptions of health among patients (again a population without health) and medical students. She found that their definitions of health fell into three categories: (1) a feeling state orientation, or a general feeling of well-being; (2) a symptom orientation, or the absence of symptoms or illness; and (3) a performance orientation, or the attainment of a competent level of physical fitness. Most importantly, she noted relationships between educational levels and the orientation to health in subjects of different socioeconomic status.

In a study of the elderly, Maddox (1962) noted that perceived health status was correlated with low morale, and health was considered less positively among persons with a history of depression. Tessler and Mechanic (1978), in a large survey in 1978, found that psychological distress was a statistically significant correlate with perceived health status. The greater the subjects' psychological distress, the poorer the subjects rated their health.



From the previous studies it is noted that although important relationships concerning health have been identified using lay persons as subjects, many questions remain unanswered. Idler (1979) has also noted the dearth of literature in this area and recommends the importance of using laity as subjects because this strategy ensures the research will "remain relevant to social reality."

### Research Setting

This research was conducted in a neighbourhood on the periphery of newly constructed downtown high-rises in the centre of a large northern Canadian city. This area is an older part of the city, consisting of single family dwellings, boarding houses, bars and small stores. Many of these are decaying, with some buildings condemned or recently replaced with high-rise apartments or light industry. The area is inhabited largely by elderly long-term residents of Ukrainian or British descent, by middle-aged single males (who reside in boarding houses), retired from or between casual jobs in northern Canada and by Native Indians. The area also includes a large Italian and Chinese district and many recent refugees from Indochina and Europe. The population is older than the city average and much below the mean socioeconomic level. The presence of transients with no fixed address, of conspicuous prostitutes and of drunks in the street has resulted in the labelling and stigmatizing of the area as "skid row."

The area has been recognized for a number of years as a "health problem" area that is under-served by physicians. In 1979, a community-based health care clinic was opened, and the current research project was organized at the request and sponsorship of this clinic. The overall purpose of the research was to understand the community health needs from the people's perspective so that a health promotion program based on the concept of neighbourhood health workers (as presently used in Third World countries) could be implemented. This article reports on a part of this project: the perceptions of health in the community. Some of the questions asked to elicit this information were: What does good health mean to you? How do you know when you are healthy? and, What do you do to stay, or to become, healthy?

### Method

As the review of the literature revealed little information regarding lay perceptions of health, inductive qualitative methods were considered most appropriate (Buzzard, 1984). Open-ended unstructured interviews would enable responses to be obtained with minimal imposition of an *a priori* framework. This approach differs from quantitative survey techniques in which the researcher constructs a conceptual framework, identifies the significant variables prior to the collection of data and then measures the distribution of these identified health beliefs in the population.

Data for this project were collected by three lay community members. The interviewers spent the first two weeks of the project in a training program which included instruction in basic interviewing and observational techniques, introduction to the theories of illness, traditional medicine, health behaviours and the process, problems and ethics of field work. Provided the informant consented, interviews were tape recorded, and the interviewers also recorded observations and their more subjective impressions in a diary.

Theories of illness causation include categorization of etiology of illness into supernatural, non-supernatural, ultimate and immediate causes (Morley, 1978, p. 2), and this orientation was important to inform the interviewees that we were not only interested in the "correct" medically recognized causes of illness.

The use of trained community members has been used previously to interview informants. Nichter (1984) noted that the use of a participatory research team is the first step towards community involvement. Furthermore, the use of open-ended interviews reduces the distortion of survey data resulting from "errors in the linguistic and conceptual intelligibility of survey questions, interview questions involving culturally sensitive subjects, informants' fears of repercussions for responding negatively to questions posed by outsiders, the dynamics of image management, etc." (p. 238).

The transient nature of the population and the attitude of suspicion towards researchers indicated that snowball sampling techniques would be most appropriate. Initial interviews were conducted with persons who already had a trust relationship with clinic personnel. At the conclusion of these interviews, those subjects were asked to refer the interviewer to another informant. Thus, social networks were followed, rather than selecting a probability sample.

It was intended that two (or more) interviews would be conducted with each informant. The purpose of the first interview was to establish a trust relationship with the subject, to obtain demographic information and a life history and to allow the subject to become accustomed to the interview procedure and the tape recorder. The second interview was conducted to obtain information about perceptions of health and use of the health care system. If the informant was a transient and only one interview was possible, the content of the two interviews was combined. Interviews were conducted with a total of 93 persons (47 male and 46 female) in a high-rise apartment building for the elderly, in a male transients' shelter, in a day shelter for women, in private residences and on the street. Forty-nine informants were aged between 20 and 59 years, and 44 were 60-89 years.

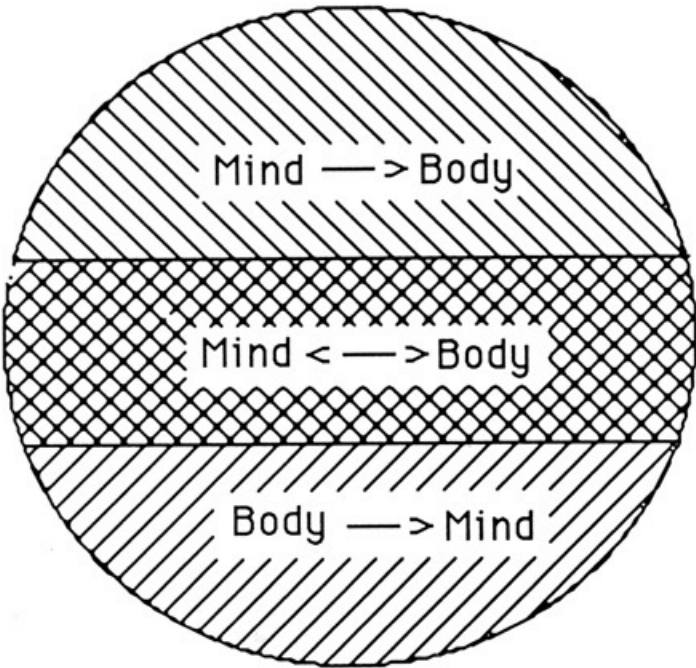
Eighteen informants were Native Indian, 26 identified themselves as Anglo-Canadian, five were French Canadian and the remainder were of European ethnic origins. Approximately half of the sample had less than grade eight education, and six people had some university education. Most of the informants who were employed worked in non-professional occupations; 15 were retired and 15 were unemployed.

*Data analysis*

All interviews were transcribed and coded according to common characteristics. Content analysis was performed according to the rules of parsimony, with the data sorted initially into broad themes and then coded into smaller categories (Field & Morse, 1985). The categories were then described, labelled and relationships between the categories were explored.

**Results**

The first categorization of responses was into three groups: those responses that attributed health to both physical and mental parameters, those that denoted health was either physical or mental dimensions and those that stated that the physical and mental parameters of health were separate (see Figure 1).



**Figure 1: Holistic Concept of Health: Interaction Model**



### *The inclusive (holistic) perception of health*

I think health is a total picture of a person. It's not just a physical thing. I think it's the whole package.

Health... is not just physical health – but mental and spiritual health as well... the whole person is what health is about.

These were typical statements of those who presented a holistic (mind and body) definition of health. However, there was agreement concerning the interaction between the mind and the body. Many informants suggested time-sequence and conditional relationship between the mind and the body. For example, some stated if the mind was healthy, then the body would be healthy, and others suggested the reverse.

The first group suggested that mental health was the most important aspect and that physical health was not possible without it. That is, the mind affects the body:

All the body depends on your brain... with a healthy mind... the remaining part of the body will be healthy.

If you want to do something, you forget you are sick. Sickness, troubles, ... you have to forget all that.

Your mental health is how you think. I guess if your mental health got dragged down, then your physical, in turn would get dragged down, too... and if your mental health is good, then your physical health is good too.

Lack of health was seen by this group as failure of the "mind over matter":

No-good [sic] health is when you'd be preoccupied with headache or toothache.

You can depress yourself into a sickness.

Now he does not go to doctors but is able to control his health by his own mind. When he's feeling bad he does not take pills, but tries to relax, take a good rest, and re-think his life in his mind [interviewer's notes].

The second group suggested a reverse interaction, that physical health is essential for mental health:

If I don't have pain, I feel real happy.

Feeling good depends on how my back and legs feel.

Furthermore, physical comforts may be used to reduce psychological distress. Eating was most commonly mentioned:

When she gets under stress, she eats.

I know when I'm depressed, I pig-out a lot. I could eat two boxes of chips – I eat like a pig!

Only a few respondents suggested this interaction could go either way; that the mind or the body could be the determinant of health:

If you're physically ill, it will lead to emotional illness...if you are emotionally ill, it can lead to physical illness... they're related.

### *Separate (mind-body) perception of health*

Many informants did not suggest an interaction between physical and mental health. They stated that these two components were separate, or they cited only physical or only mental indicators of health.

**Physical health.:** Health within this category consists of many components. The first is environment, or perhaps the ecological perspective. Health is derived from having a warm, clean place to live, fresh air, sunshine and "good", clean water to drink. An elderly man in a high-rise apartment said, "You need lots of fresh air, but we don't get much, anymore."

The second aspect is nutrition. Some informants suggested that "health was the ability to eat." In these cases, health was measured by whether or not they were able to eat food. This was not surprising as some of the people interviewed were alcoholics or elderly, frail folk.

Discriminative eating also contributed to health. This was avoiding junk foods and by eating wholesome foods: "Health is eating wholesome." Informants reported that food should be fresh and preferably organically grown. Store-bought or canned foods were considered to be low in vitamins or even poisonous. Food also had to be in the right quantity – plentiful enough and yet overeating was to be avoided. Vitamin and herbal supplements are included in the nutrition category because they were used as a food or a food-substitute.

The third aspect, sleep, was interesting as it was considered to be both necessary for health and an indicator of good health. In other words, if you are able to sleep, then you are healthy; and, if you are healthy, then you are able to sleep. Again, the quality of sleep was important.

It's not the length of the sleep that counts, but the depth of sleep... some people can sleep for twelve hours, another one can sleep for six hours. That very deep sleep for six hours is better than twelve hours.

The fourth component was physical control, which was discussed on four levels: mobility, work, walking and exercise. The first, mobility, is simply the ability to move around. Being able to perform normal activities of daily living was perceived as an indicator of health.

Well, I can't describe it [being healthy] because I haven't got it, but the [healthy] person can get around by himself. . . do everything himself!

The next level, work, is both an indicator of health and necessary to maintain health. As an indicator, informants reported.

Health is being able to work every day, and make a proper living for myself.

Work is described as a way to maintain health.

When people work – not laze around – work is healthy... work is good for people.

The remaining two types, walking, and exercising, are ways informants used to remain or become physically fit – a condition equated with good health.

My mother is in the nursing home – I walk there and back – and I find that keeps me healthy. I don't know why.

Walking keeps my blood circulating a little better, you know. And it keeps this arthritis out of my system – the pains... you're loosening up your muscles beyond the control of arthritis.

Every week... I went to the stadium and did weight-lifting – really stressed my body – really fully worked out. And sometimes I went swimming.

The last category in physical health was absence of disease. Informants stated:

I tell you, when you're healthy, you're not sick!

Only one informant suggested that it was necessary to have a check-up to make sure you're not sick, implicitly differentiating between disease and illness.

***Psychological (mental) health:*** Health perceptions in this group could be sorted into six domains: energy, the ability to cope, control of the body, religion, spiritual health and happiness. The first, labelled "energy", is described differently from the energy derived from exercise. It is the energy to care for and to feel for oneself:

Health is keeping us lively, eh?

Well, being healthy to me, is I can always do everything I want in the world.

Closely allied to energy is the ability to cope, to psychologically handle day-to-day stressors. It was expressed as "coping with life":

Good health is when you don't have to worry about your health... Your state of health doesn't hinder the things you wanna do.

A healthy lifestyle was described as control, the adoption of religion and good interpersonal relationships. Control of the body was essential for health because lack of control, especially towards gambling and alcohol, was perceived as a threat to health:

I went through quite a life over gambling... like if a person can't control themselves, then it's a sickness.

A large number of informants reported on religious and spiritual health, which was sometimes differentiated from "emotional" health. Praying was perceived to be healthy, and religion was seen as a way to obtain health.

I found myself – I found my way of religion, my way of living. I felt better – you start looking after yourself.

Love and close and harmonious relationships with others was also important.

Good health is being able to have a relationship with people.

With health, you've gotta have love, you gotta love one another more – get more love in the family.

One foster mother explained the consequences of children not being loved:

Oh sure, that's related to health! If you don't love 'em [kids] they think nobody wants them, eh? They go in the corner, sit down there... they just worry and what they do is just pee in bed.

The last aspect of health in this category is happiness. This was both seen as the outcome and an indicator of health, for example, "if you are healthy then you are happy."

I'm very happy when I'm healthy... you're happy, you're healthy, nothing bothers a person.

In summary, the components of the psychological definition of health were: energy, coping, control of the body, spiritual love and happiness.

### Discussion

From the preceding analysis, it is evident that health is a multifaceted and expansive concept. In this study the lay concept of health consists of both criteria traditionally used to measure health and health promotion strategies. Van der Geest (1985) noted that this "second hand" use of the term healthy (as it applied to healthy air, healthy food and so forth) is derived from the relationship between the physical state and dependences on the environment to achieve or maintain that state.

In 1981, Keller examined 42 professional definitions of health. Content analysis was performed on these definitions (Keller, 1981). Keller's categories were not used for this analysis because using *a priori* categories violates inductive approaches where such categories must be derived from data. However, a comparison with Keller's categories (Table 1) shows that professional perceptions of health and lay perceptions of health contain commonalities within broad biological-psychological-holistic dimensions.

Aspects of physical health not specifically included in the professionals' definitions were nutrition, sleep, exercise and work. Although these may be argued as being a means to an end, they were presented by lay informants as an indicator or state of health. Heredity and adaptation are two concepts in the professional definitions that were not included in the lay definitions:

The whole person is what health is about. I'm not sure if I think a good doctor will acknowledge that, you know. I don't expect the doctor to be a spiritual adviser or a counsellor... [But] I think any health professional should understand these elements of health are very important.



**Table 1**

***Comparison of Professional and Lay Definitions of Health***

Components of Health	
Professional	Lay
<b>Physical/Biological</b>	<b>Physical</b>
Heredity	—
Adaptation	—
—	Nutrition
—	Sleep
Opposite of (or Freedom from) Disease	Not Being Sick
Daily Living/Activity	Ability to Move Around
	Working
	Walking
	Exercise
<b>Holistic</b>	<b>Holistic</b>
<b>Emotional/Psychological</b>	<b>Psychological (Mental)</b>
Cultural	—
Integrated Functioning	Energy
Optimal Capacity	Coping
Spiritual Spiritual	
Harmony	—
Social	Love
Self-knowledge	—
Self-realization	Happiness

<sup>1</sup> From Keller (1981)

***Identifying relationships***

In this study, emic analysis of the informants' perspectives on health provided a mechanism for obtaining the beginning stages of a health model. In addition to clarifying the dimensions of health, a hypothesis arising from these data was tested. The question is: "Is one's perception of health derived from past and/or present health status?" The hypothesis tested was: "Subjects who define health in physiological parameters are experiencing chronic or acute life-threatening illnesses or diseases." Conversely, "subjects who define health in psychological, mental health parameters are those who report that they "feel good" and do not have acute/chronic illnesses.

The hypothesis was accepted and is statistically significant ( $\chi^2 = 9.905$ ,  $df = 1$ ,  $p < .005$ ), showing that there is a relationship between one's definition, or perception, of health and one's own health status.

### *Suggestions for further research*

It is important to note, however, that these data do not show the time relationship between the individual's perception of health and health status. For example, it is not known if the individuals using a psychological, mental health definition of health will change to a physical definition if and when they become sick. Furthermore, it is not possible, from these data, to derive gradations of perceptions of health and correlate these scores with a gradation of perceived and real health status. It is recommended that a quantitative survey be conducted using a probability sample to test important insights into the relationships suggested in this study.

Another question to be examined in future research is: Is there a relationship between a person's perception of health and health care-seeking behaviours? For example, are those subscribing to a physical model of health more likely to utilize the medical system and display patterns of early utilization and compliance with treatment than those who view health as a psychological state? Is there a relationship between those persons using a psychological model and individual coping, religion, home remedies, support networks and the timing of entry into the health care system? And do those persons who believe in the holistic model utilize both systems, selectively choosing from each depending on needs?

Further research, both longitudinal and survey studies, will be needed to test these questions. However, the beginning plan of this research and the development of these questions would not have been possible without this initial qualitative work.

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## RÉSUMÉ

### **L'idée que les residents de quartiers pauvres des villes se fait de la santé**

Les données de santé obtenues de 96 résidents de quartiers pauvres des villes ont été analysées par des méthodes anthropologiques. Les renseignements recueillis démontrent que les personnes interrogées considèrent la santé comme un concept complet physique et mental ou bien un concept uniquement psychologique ou uniquement physique.

Parmi ceux qui ont donné un rapport sur la définition totale les uns suggèrent que l'esprit influence le corps alors que les autres suggèrent une interaction contraire. De ceux qui optent pour une définition distincte de l'esprit et du corps la différence majeure est la présence de maladie chronique ou maladie grave du sujet. Les handicapés par exemple offrent une définition physique ("corps") alors que les personnes en bonne santé suggèrent une définition psychologique de santé mentale (esprit). Ce classement offre une statistique significative ( $\chi^2 = 9.905$ ,  $df = 1$ ,  $p < .005$ ). Cette recherche démontre qu'il y a relation entre l'idée qu'on se fait de la santé et son propre bien être.

# NURSING RESEARCH AT THE BACCALAUREATE LEVEL: A UNIQUE TEACHING/LEARNING MODEL

Jacqueline G. Roberts . Joan M. Crook

"If you don't know where you are going,  
It doesn't matter what path you take"

— Anonymous

This statement reflects the confusion that has existed in baccalaureate nursing programs about the purpose and focus of research in the undergraduate curriculum. Although there is some agreement that the emphasis should be on developing informed consumers of research, it is unclear what informed means; thus there is confusion about how to achieve it. Most educators agree that undergraduate nursing students should be prepared to appraise the nursing research literature critically (Fleming, 1980; Levin, 1983; Overfield & Duffy, 1984). Some educators suggest the focus of research should be applied and should be relevant to clinical practice (Horsley, 1983; Levin, 1983) and that the student should develop a "positive attitude" toward research (Levin, 1983; Spector & Bleeks, 1980; Van Bree, 1981). Curriculum developers continue to wrestle with questions about what knowledge and skills are required concerning the subject of research and how this subject can be taught and learned most effectively.

In a review of the literature on teaching research, Overfield and Duffy (1984) divided the various approaches to learning into three major categories: 1) learning by critiquing; 2) learning by proposing to do; and 3) learning by doing. Our approach is to include "learning by doing in collaboration" among these categories. This approach requires the identification, co-ordination and collaboration of supportive faculty who are knowledgeable and who participate in on-going relevant clinical research.

## Course Description

The major focus of the "Doing in Collaboration" research course in the 4th year of our undergraduate nursing program is the development of the student's

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understanding of the research process through knowledge acquisition and practice experience. To accomplish this, emphasis is placed on the student's potential role as a generator of researchable questions, as an enthusiastic collaborator in research related to clinical practice, and as a critical appraiser of nursing and health care literature. Each student participates in an on-going research project where concepts of research methodology, literature review, implementation and analysis can be applied and focused.

The student's background on entry to the course is important. Throughout the four years of the program the learning environment and teaching methods include small group tutorials, a problem-based learning format, and individualized learning plans. The scientific method is used and the student develops a questioning approach to clinical practice, and a critical approach to learning. In addition, in Year III of the program, students are formally introduced to the principles of clinical research and statistical inference. The particular emphasis is on critical assessment of evidence that is related to the care of patients as presented in nursing and health sciences literature.

The structure of the 4th year research course includes the following key components: a series of large group sessions, a research practicum, a research day and an evaluation portfolio.

### *Large group sessions*

These large group lecture and discussion sessions are held weekly for 12 weeks and address the various steps of the research process. Various members of the School of Nursing faculty teach each session and relate the content to their own research projects. A summary of the schedule of topics is shown in Table 1.

**Table 1**

### *Schedule for Large Group Sessions*

- 
- |    |   |
|----|---|
| A. | Overview and Historical Development of Research in Health Care.           |
| B. | The Research Process and the Development of Knowledge.                    |
| C. | Asking Questions and Developing the Research Problem.                     |
| D. | Conducting a Literature Review: Critical Appraisal Revisited.             |
| E. | Research Designs: Hypothesis Generating.                                  |
| F. | Research Designs: Hypothesis Testing.                                     |
| G. | Measurement: Forms of Observation and Data Collection.                    |
| H. | Measurement: Selecting an Instrument; Issues of Validity and Reliability. |
| I. | Analysis: Descriptive.  |
| J. | Analysis: Inferential.  |
| K. | Ethics and Politics of Research   |
| L. | The "Critical Eye": Limitations, Bias, and the Evaluation of Proposals.   |
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## *The research practicum*

The actual research activity is accomplished by means of "hands on" experience and attachment to faculty research teams. Students negotiate a role that they can perform within a research project. Collaboration provides a service to the project and a learning experience for the student. Placements on the teams are based on the best possible match between the student's area of interest and the researcher's project.

The exact nature of the student's role and task varies from project to project. Students discuss their learning objectives and plan their activities with the research faculty team leader. They attend research team meetings to review project activities and related methodology issues. In addition, these meetings provide an opportunity for the students to present their work and tasks. This attachment provides the student with a positive experience in research collaboration and the chance to apply knowledge of research methods to a clinical research problem.

The model used is comparable to a clinical practice placement. Students learn while providing service by designing studies, interviewing patients, analyzing and summarizing data, determining reliability and validity of instruments and reviewing the literature. Specific experts within the Faculty of Health Sciences (statisticians, computer experts) act as additional resources and are called upon if necessary.

Each year, approximately 110 students are placed on 40 – 42 research teams within the Faculty and the local nursing community. Some projects change each year, some do not. Often a new group of students join a project at a later stage of its development. Table 2 summarizes the scope and variety of the projects. Examples of the particular activities that students have negotiated within three representative research studies are shown in Figure 1.

## *Research day*

An important component of research is communicating the progress and results of the research activity. A day, patterned along the lines of a nursing research conference, is held at the end of term; posters are displayed and oral presentations are given. This approach has also been used by others (Sweeney, 1984).

Students submit abstracts of their presentations for evaluation by faculty. Criteria for evaluation include: clarity of the stated purpose or objectives of the study; whether the components of the research process applicable to the study were addressed; proper identification of the present stage of the study; implications for the advancement of knowledge in the area; and, finally,

whether the abstract was well organized, followed a logical sequence and was written in a scholarly manner. A Likert scale is used for rating each of the criteria.

Student teams design and display a poster on Research Day. In addition, posters are evaluated by the course co-ordinators, faculty, peers and visitors to the poster station. They are assessed for clarity, conciseness, organization, creativity, attractiveness and whether the presenters were able to clarify issues related to their project.

**Table 2**

***Clinical and Educational Research Projects Presented at Research Day***

Focus of Research Question	Target Study Population				
	Clinical		Cross Cultural Subjects	Health Service Organization	Educational (Patient Teaching)
	Inpatient	Outpatient			
Determining Health Needs	*	**** ****	**		*
Therapy: Efficacy	**	***		*	***
Effectiveness	*	**		**	****
Health Care Coverage		*		* *	*
Methodological Research		*****		*	
Historical Research				*	
Basic					*

Each \* represents one study

Project Name/Research Question or Area of Focus:	Focus of Student's "Hands On" Experience
1. Pain Measurement	
Validity and reliability testing of an assessment tool for chronic pain patients.	Structured interviews of new patients admitted to Pain Clinic. Attending physician assessment data interviews and collecting assessment data for validity testing. Data analysis: Correlations.
2. Sleep Habits	
Sleep disorders in selected elderly populations (well elderly and those with a chronic health problem).	Telephone interviews with structured questionnaire. Data analysis: prevalence, descriptive and inferential statistics (t-tests).
3. Primary Nursing Randomized Trial	
Comparing primary nursing versus team nursing on nurse absenteeism, work environment scores, patient satisfaction, and clinicians' assessment of quality of nursing care.	Distributing patient questionnaires. Scoring questionnaires. Descriptive statistics. Inferential statistics (t-tests and chi-square). Use of microcomputer.

**Figure 1: Student Activities**

### *The evaluation portfolio*

The student is responsible for developing an evaluation portfolio for the purpose of her or his own evaluation. The portfolio includes a written abstract, poster and abstract evaluations and a summary of participation in team meetings and project (the "hands on" experience). The research team faculty reviews the portfolio with the student, evaluates and assigns a grade. Descriptors of excellent, very good, good, satisfactory and unsatisfactory are provided to assist with the final evaluation. As an example, the descriptor for an excellent grade is as follows.

The student demonstrates in-depth knowledge of research concepts and the research process. She demonstrates consistent use of critical thinking in the application of the research process through project participation. The student engages in on-going, realistic self evaluation,

seeks and follows through on feedback to improve performance. The student is curious, creative, self-directed and is able to negotiate and carry through a responsible role with the research team. Resources are used effectively.

### Course Evaluation

In order to evaluate the response by students to the course methods and objectives, structured questionnaires were developed and administered to the students, immediately following the completion of the course. The questionnaire included items that addressed each course component – large group sessions, poster presentation or abstract, evaluation tools, research day and research attachment.

Eighty-five percent indicated that they thought Research Day and writing abstracts were useful learning experiences. Of importance is that students consistently rated these learning opportunities highly. However, students least liked the large group sessions; 25% stated they had "heard it all before". As well, students evaluated their research attachments and course involvement for various opportunities. The percentage of students responding to each descriptor of learning opportunities is given in Table 3.

**Table 3**

***Course Evaluation:  
Students' Rating of Learning Opportunities***

	Excellent	Satisfactory	Poor
The course provided the opportunity to:			
1. Develop clinical knowledge in your area of interest.	85%	15%	0%
2. Meet learning objectives.	75%	19%	6%
3. Discuss and share research knowledge and ideas with peers.	92%	4%	4%
4. Receive feedback.	77%	17%	6%
5. Excite your need to know more about research.	81%	15%	4%
6. Identify areas of weakness.	88%	8%	4%
7. Ability to apply research knowledge.	75%	14%	11%



Students indicated, in the comment section of the questionnaire, that they especially enjoyed the posters on Research Day and working with research teams. However, they also indicated there was some "lack of consistency in workloads between groups".

### Conclusion

Expected and unexpected benefits have occurred for students and faculty as a result of this research course. The visibility of nursing research within the student group, the faculty, and the community has increased substantially.

Approximately 300 people attended Research Day and ten research teams presented their work at Nursing Academic Seminars. Several proposals were submitted for funding and several articles were submitted for publication. While we have not attempted to collect data systematically, student pride in being able to demonstrate the knowledge that was gained has been noticeable. The course gives real support to the research teams and subsequent activities, not only in terms of time committed by the students, but also through the suggestions for research methods. Often the student's "critical eye" adds to revisions in the project's research techniques. Faculty spend approximately one hour per week in related activities with students and student involvement in projects varies.

The benefit for the students appears to be mainly in the knowledge they acquired, and the positive attachment they enjoyed with the research team. They expressed the feeling that they were contributing to "real" work that had the potential to contribute to the quality of nursing care.

Other spin-offs were evident. Some students continued in a research role when some of the projects were funded. The research course has developed undergraduates who now have expertise in defining relevant clinical problems through hands-on experience and collaboration. Through informal reports this method appears to be helpful in developing research knowledge and stimulating research interest. Now further evaluation of the long term results of this method of teaching research is necessary.

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## RÉSUMÉ

### **La recherche en sciences infirmières dans les études menant au baccalaureate universitaire: Une système unique d'apprentissage**

L'Université McMaster a introduit un nouveau cours dans son programme d'études menant les infirmières au baccalauréat universitaire. C'est un cours d'introduction à la recherche pour les étudiantes-infirmières de quatrième année. Ce cours comprend une série de séminaires auxquels toutes les étudiantes participent et durant lesquels les diverses étapes du processus de recherche sont identifiées, analysées et illustrées par des exemples tirés de projets en cours. De plus, les étudiantes sont rattachées à divers projets de recherche, en cours ou nouveau. Chaque équipe d'étudiantes prépare un précis de sa contribution au projet (par exemple, recherche bibliographique, et les différentes équipes préparent un placard au sujet de leur projet de recherche, ou d'un de ses aspects particuliers, qui sera exposé durant le "jour de la recherche". Chaque étudiante soumet à l'évaluation de ses professeurs un dossier qui contient les résultats de son travail et les connaissances qu'elle a acquises.

Ce cours essaye de répondre à la double expectative des études menant à un diplôme d'infirmière: le besoin de préparer les étudiantes-infirmières à la recherche clinique, et de les préparer à mettre en pratique les résultats de ces recherches. A cette fin, le processus d'apprentissage a été unifié au processus de recherches cliniques. A court terme, le projet a rendu plus visible les chercheurs infirmières au sein de la faculté des sciences de la santé, et au sein des diverses aires cliniques dans lesquelles les projets sont effectués. De plus, les professeurs ont bénéficié de cet apport de main d'oeuvre humaine à leurs projets, et les étudiantes ont bénéficiées de cet apprentissage "en collaboration".

# INFLUENCE DE FACTEURS PSYCHO-SOCIO-COGNITIFS SUR L'UTILISATION DE LA CONTRACEPTION A L'ADOLESCENCE

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## Introduction

Les adolescents et adolescentes forment un groupe-cible aupr  s de qui l'infirmi  re intervient fr  quemment. Que ce soit dans les   coles, les centres locaux de sant   communautaire (CLSC), les cliniques de planning familial, l'infirmi  re est en pr  sence de jeunes qui expriment leur sexualit   par la g  n  ralit   et par cons  quent se trouvent souvent confront  s    des situations comportant des risques pour leur sant  .

L'activit   sexuelle chez les jeunes se manifeste de plus en plus pr  cocement. Le pourcentage des filles de 15    19 ans actives sexuellement est pass   de 30%    50% entre 1971 et 1979, selon une   tude am  ricaine (Zelnick & Kantner, 1980). Chez les gar  ons, 70% d'entre eux ont d  j   eu des relations sexuelles entre 17 et 21 ans (Zelnick & Shah, 1983). Des donn  es qu  b  coise r  v  lent qu'environ 50% des adolescentes   g  es de 13    18 ans auraient eu des activit  s sexuelles (Frappier, 1980; L  gar   et B  rub  , 1985; Vandal, 1982).

Lorsqu'ils amorcent leur projet sexuel, plusieurs adolescents et adolescentes n'utilisent pas de contraceptifs. Certains d'entre eux utilisent une m  thode de fa  on sporadique ou encore une m  thode peu s  re ou inefficace (Cvetkovich & Grote, 1977; Finkel & Finkel, 1978; Zelnick & Kantner, 1977, 1980). La r  sistance des tr  s jeunes filles    utiliser la contraception (Zabin *et al.*, 1979) se traduit souvent par l'av  nement de grossesses non d  sir  es (Frappier, 1980) et une fr  quence plus   lev  e d'avortements (Conseil des Affaires Sociales et de la Famille, 1984).

L'augmentation des relations pr  maritales pr  coces    l'adolescence et le peu d'utilisation de moyens contraceptifs ont conduit les auteurs    entreprendre

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une étude en vue de déterminer l'influence de facteurs psychologiques, sociaux et cognitifs sur l'utilisation de la contraception par les jeunes.

### *Le cadre théorique*

Une cadre theeorique regroupant différents facteurs psycho-socio-cognitifs déjà identifiés dans la littérature a été proposé par Urberg (1982). Ce cadre théorique sous-tend l'étude de l'usage de la contraception et des facteurs en présence. Il s'appuie d'une démarche de resolution de problèmes qui s'inspire de la théorie du développement cognitif de Piaget (1969). Selon le cadre proposé, une série d'étapes menant à la résolution de problèmes sont franchies avant l'adoption de la solution retenue. La personne susceptible d'utiliser la contraception reconnaît l'existence d'un problème à résoudre; sa motivation la conduit à considérer les solutions possibles, à les évaluer, à retenir la solution la plus appropriée qui sera ensuite appliquée. Cette approche a permis de classifier de manière logique un ensemble de facteurs susceptibles d'exercer une influence sur l'utilisation de la contraception. Il s'agit de facteurs psychologiques, sociaux et cognitifs.

Les facteurs psychologiques étudiés sont les perceptions des adolescents et des adolescentes de leur comportement sexuel; leurs perceptions de la grossesse concernant les avantages et inconvénients accordés à une grossesse éventuelle; les perceptions de la contraception relatives à la responsabilité d'utiliser un moyen contraceptif et leur degré d'affirmation de soi quant à la décision d'utiliser un moyen ou une méthode contraceptive.

Les facteurs sociaux étudiés sont l'influence des personnes significatives (pairs, parents, partenaires) sur l'utilisation de la contraception; sur l'accessibilité à des moyens contraceptifs et sur les habiletés de prise de rôle des jeunes. Ces habiletés consistent en la capacité des jeunes à discuter de la contraception, à saisir le point de vue de son partenaire et à communiquer efficacement ses propres idées.

Les facteurs cognitifs pouvant influencer les jeunes dans l'usage de la contraception incluent des habiletés cognitives; des connaissances pertinentes sur la physiologie de la reproduction; des perceptions sur les coûts et les bénéfices inhérents aux activités sexuelles et à l'adoption ou au rejet d'une pratique contraceptive. Les habiletés cognitives sont les capacités inhérentes au développement intellectuel des jeunes telles la capacité de faire le lien entre la fréquence des relations sexuelles et la probabilité d'une grossesse; l'habileté à envisager les conséquences d'une relation sexuelle non protégée et à prévoir l'utilisation de moyens contraceptifs pour les éviter.

## *Hypothèses*

Les principales hypothèses formulées sont les suivantes:

1. Les adolescents des deux sexes qui sont influencés de manière positive par les facteurs psychologiques utilisent un moyen contraceptif comparativement à ceux et celles qui ne le sont pas.
2. Les adolescents des deux sexes qui sont influencés de manière positive par les facteurs sociaux utilisent un moyen contraceptif comparativement à ceux et celles qui ne le sont pas.
3. Les adolescents des deux sexes qui sont influencés de manière positive par les facteurs cognitifs utilisent un moyen contraceptif comparativement à ceux et celles qui ne le sont pas.
4. Les adolescents des deux sexes plus âgés utilisent davantage un moyen contraceptif comparativement à ceux et celles qui le sont moins.

## *Méthodes*

Une étude corrélative a été menée auprès d'un échantillon de 1072 adolescents (509 filles et 563 garçons) fréquentant des écoles secondaires de la Commission des Ecoles Catholiques de Montréal (CECM). L'étude avait pour but de décrire d'une part l'activité sexuelle des jeunes et d'autre part de déterminer l'influence de facteurs psycho-socio-cognitifs sur l'utilisation de la contraception. La méthode échantillonnale utilisée a consisté dans le choix raisonné de six polyvalentes représentatives de divers niveaux socio-économiques. L'indice global de défavorisation de l'ensemble des écoles de la région de Montréal a servi à déterminer ce choix. Dans chaque école, sept classes de niveau secondaire III, IV et V ont été choisies de façon aléatoire simple.

Le questionnaire, élaboré suivant l'approche suggérée par Urgerg (1982), se composait de 69 questions fermées regroupant les facteurs psycho-socio-cognitifs relatifs à l'exercice de la sexualité, à l'utilisation de la contraception et à des données socio-démographiques. L'exercice de la sexualité fait référence aux relations sexuelles complètes (avec pénétration). Le questionnaire visait à identifier les opinions ou les comportements des adolescents en regard des facteurs étudiés.

Des experts choisis pour leur connaissances en matière de sondage, de sexualité et de contraception à l'adolescence ont vérifié, à l'aide d'une grille d'analyse, le contenu du questionnaire, lequel a été prétesté par la suite auprès de 35 élèves de niveau secondaire. La version finale du questionnaire a



été standardisée et distribuée dans les classes par des assistants de recherche. Les élèves ont rempli eux-mêmes les questionnaires sous la supervision d'un ou deux assistants. Des informations leur ont été fournies sur la nature de l'étude et sur le caractère confidentiel des informations obtenues.

## **Résultats**

D'un point de vue socio-économique, les six écoles choisies se sont avérées représentatives des 52 écoles de la CECM selon l'indice de défavorisation des écoles de l'échantillon ( $x = 27,46$ ;  $s = 4,35$ ) qui est à peu près similaire à celui de la CECM [ $(x = 29,33$ ;  $s = 7,76)$  (Conseil scolaire de l'île de Montréal, 1984)]. Des données de Statistiques Canada (1981) indiquent que les sujets sont comparables à d'autres jeunes du Québec en ce qui a trait à la scolarité et à l'occupation des parents. Au point de vue ethnique, ils diffèrent des adolescents de l'extérieur de Montreéal puisque 20% d'entre eux sont de nationalité autre que canadienne.

### **Données socio-démographiques**

Les données socio-démographiques illustrées au tableau 1, montrent la répartition des adolescents selon l'âge, le sexe, le niveau scolaire et l'ethnie. Le taux de participation a été très élevé, 98,8% des jeunes ayant accepté de répondre au questionnaire.

### **Profil sexuel et contraceptif**

Les résultats relatifs au profil sexuel et contraceptif sont présentés selon la fréquence ajustée. De façon générale, les données manquantes ne représentent qu'un faible pourcentage de l'échantillon total (5%).

Le profil sexuel des deux groupes d'adolescents présenté au tableau 2 indique que 41,3% des garçons et 38,7% des filles sont actifs(ves) sexuellement. Les filles âgées de 14 ans sont plus actives sexuellement que les garçons du même âge. Toutefois, la situation est inversée chez les jeunes de 15 à 17 ans. Lorsqu'on demande aux adolescents et aux adolescentes d'indiquer l'âge qu'ils avaient lors de leur première relation sexuelle (tableau 3), on obtient une image contrastante avec le tableau 2.

Parmi les adolescents et les adolescentes actifs(ves) sexuellement plus de 70% ont utilisé un moyen contraceptif lors de leur première relation sexuelle (tableau 4). Le tableau 5 présente le type de moyen contraceptif utilisé à la première et la dernière relation sexuelle. On observe que les adolescent(es) utilisent principalement le condom lors de leur première relation, alors qu'ils utilisent davantage la pilule lors de leur dernière relation. En ce qui a trait à l'échec contraceptif, huit pour cent des filles confient une grossesse antérieure.

## *Vérification des hypothèses*

Des analyses ont été effectuées à l'aide du test statistique du chi-carré afin de vérifier l'influence de différents facteurs sur l'utilisation de la contraception par les adolescents et les adolescentes. Pour des fins d'analyse, les élèves ont été répartis en trois sous-groupes constitués selon le type de contraception utilisé lors de leur dernière relation sexuelle, soit des moyens féminins, des moyens masculins et l'absence de contraception. Le seuil de signification pour la vérification des hypothèses a été établi à  $p < 0,05$ .

### *Influence des facteurs psychologiques*

La première hypothèse s'énonce comme suit: il n'y aura pas de différence significative d'un point de vue statistique entre les adolescents des deux sexes

**Tableau 1**

#### *Répartition des adolescents, adolescents selon l'âge, le sexe, le niveau de scolarité*

Caractéristiques	Garçons	%	Filles	%
<b>Age</b>				
14 ans et moins	80	(14.4)	82	(16.2)
15 ans	160	(28.8)	144	(28.4)
16 ans	170	(30.6)	168	(33.1)
17 ans	101	(18.2)	96	(18.9)
18 ans et plus	44	( 8.0)	17	( 3.4)
Age moyen	15.76		15.65	
S.Total	555		507	
<b>Niveau de scolarité</b>				
Secondaire III	214	(38.0)	159	(31.2)
Secondaire IV	197	(35.0)	174	(34.2)
Secondaire V	152	(27.0)	176	(34.6)
S.Total	563		509	
<b>Ethnie</b>				
Canadien-Français	458	(81.9)	412	(81.3)
Haitien	33	( 5.9)	30	( 5.9)
Italien	13	( 2.3)	15	( 2.9)
Portugais	6	( 1.1)	16	( 3.2)
Vietnamien	17	( 3.1)	10	( 2.0)
Autres	32	( 5.7)	24	( 4.7)
Total	559		507	

**Tableau 2**

*Distribution des sujets selon l'activitee sexuelle, l'âge et le sexe<sup>a</sup>*

Activité	14 ans		15 ans		16 ans		17 ans		18 ans & +		Total	
Sexuelle	F	G	F	G	F	G	F	G	F	G	F	G
Actifs	21	14	38	49	71	70	52	62	11	32	193	227
	(26.6)	(17.7)	(27.0)	(31.4)	(42.5)	(41.5)	(54.7)	(61.4)	(64.7)	(72.7)	(38.7)	(41.3)
Non Actifs	58	65	103	107	96	100	43	39	6	12	306	323
	(73.4)	(82.3)	(73.0)	(68.6)	(57.5)	(58.8)	(45.3)	(38.6)	(35.3)	(27.3)	(61.3)	(58.7)
Total	79	79	141	156	167	170	95	101	17	44	499	550
	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)

<sup>a</sup> Fréquence ajustée

Tableau 3

*Répartition des sujets des deux sexes actifs sexuellement selon l'âge à la 1ère relation sexuelle<sup>a</sup>*

Age (ans)	Filles		Garçons	
	N	%	N	%
13 ans ou -	26	( 13.7)	47	( 29.9)
14 ans	70	( 36.8)	76	( 33.8)
15 ans	47	( 24.7)	66	( 29.3)
16 ans	37	( 19.6)	31	( 13.8)
17	9	( 4.7)	5	( 2.2)
18 ans et +	1	( 0.5)	0	( 0. )
Total	190	(100.0)	225	(100.0)

<sup>a</sup> Fréquence ajustée

Tableau 4

*Utilisation d'un contraceptif lors des premières et dernières relations sexuelles des sujets<sup>a</sup>*

	Première relation				Dernière relation			
	Filles		Garçons		Filles		Garçons	
	N	%	N	%	N	%	N	%
oui	131	70.4	159	71.3	149	83.7	161	83.4
non	55	29.6	64	28.7	29	16.3	32	16.6
Total	186	100.0	223	100.0	178	100.0	193	100.0

<sup>a</sup> Fréquence ajustée

Tableau 5

*Moyens contraceptifs utilisés par les sujets lors des premières et dernières relations sexuelles<sup>a</sup>*

Moyen Contraceptif	Première relation				Dernière relation			
	Filles		Garçons		Filles		Garçons	
	N	%	N	%	N	%	N	%
Pilule	47	(32.6)	81	(42.0)	109	(69.0)	101	(57.0)
Condon	76	(52.8)	91	(47.1)	34	(21.5)	63	(35.6)
Retrait	11	( 7.7)	8	( 4.2)	8	( 5.1)	4	( 2.3)
Autres	10	( 6.9)	13	( 6.7)	7	( 4.4)	9	( 5.1)
Total <sup>b</sup>	144	(100.0)	193	(100.0)	158	(100.0)	177	(100.0)

<sup>a</sup> Fréquence ajustée <sup>b</sup> Les sujets peuvent avoir utilisé plusieurs méthodes contraceptives au même moment.

utilisateurs et non-utilisateurs de contraception quant à l'influence des facteurs psychologiques suivants: l'acceptation des relations sexuelles; l'affirmation de soi; les perceptions de grossesse et de contraception.

L'acceptation des relations sexuelles, mesurée par la présence ou l'absence de culpabilité ressentie, indique que 85% des jeunes ne présentent pas de culpabilité après une relation sexuelle. Chez les garçons, aucune différence significative n'a été décelée entre les sousgroupes d'utilisation contraceptive pour cette variable. Par contre, chez les filles, le sentiment de culpabilité se traduit par le non-recours à la contraception ( $\chi^2 = 11,14$ ; 2 dl,  $p < 0,04$ ).

L'affirmation de soi influence de façon significative l'usage contraceptif chez les filles et les garçons. Les filles réticentes à demander à leur partenaire d'utiliser un moyen contraceptif sont davantage des non-utilisatrices ( $\chi^2 = 13,08$ ; 2 dl,  $p < 0,02$ ). De plus, celles qui se sentent à l'aise de consulter un médecin ou d'aller à la pharmacie pour obtenir un moyen contraceptif ont davantage utilisé elles-mêmes un moyen contraceptif ( $\chi^2 = 22,17$ ; 2 dl,  $p < 0,0001$ ). Chez les garçons, ceux qui sont réticents à demander à leur partenaire d'utiliser un moyen contraceptif ont davantage utilisé un moyen masculin ( $\chi^2 = 16,06$ ; 2 dl,  $p < 0,003$ ).

Les perceptions des adolescents envers la grossesse et la contraception montrent que la plupart d'entre eux (95%) ne désirent pas d'enfants actuellement. Plus de 60% des sujets estiment que la responsabilité de la contraception appartient autant au garçon qu'à la fille. Un certain nombre de garçons croient que cette responsabilité relève uniquement du domaine féminin (31% vs 27%). Toutefois, aucune différence significative n'a été observée entre les trois sous-groupes formés selon le type de contraception utilisé.

### *Influence des facteurs sociaux*

La deuxième hypothèse se lit comme suit: il n'y aura pas de différence significative d'un point de vue statistique entre les adolescents des deux sexes utilisateurs et non-utilisateurs de contraception quant à l'influence des facteurs sociaux suivants: les pairs, les parents; les partenaires; les habiletés de prise de rôle; l'accessibilité aux moyens contraceptifs.

Les adolescents des deux sexes sont peu influencés par la suggestion de leurs pairs d'utiliser un moyen contraceptif. Par contre, plus de la moitié des filles et des garçons affirment que leurs parents sont au courant de leurs activités sexuelles; ces derniers ont davantage utilisé un moyen féminin ( $\chi^2 = 25,81$ ; 4 dl,  $p < 0,0001$ ;  $\chi^2 = 16,74$ ; 4 dl,  $p < 0,0002$ ). Plus de filles (56%) que de garçons se disent encouragées par leurs parents à utiliser un

moyen contraceptif (38%). L'encouragement des parents est statistiquement significatif dans l'engagement contraceptif des filles ( $\chi^2 = 16,11$ ; 1 dl,  $p < 0,01$ ).

Le partenaire sexuel influence également l'usage de la contraception chez les jeunes. Lorsque la jeune fille désire que son partenaire utilise un moyen contraceptif, 54% des garçons ont effectivement utilisé eux-mêmes un moyen. Par contre, lorsque la fille s'y objecte, elle a utilisé elle-même la contraception dans 86% des cas ( $\chi^2 = 40,03$ ; 8 dl,  $p < 0,0001$ ). Quand le partenaire s'engage dans une démarche contraceptive en suggérant à sa compagne d'utiliser un moyen, qu'il l'accompagne chez le médecin, vérifie si elle utilise ou utilise lui-même un moyen, le pourcentage des utilisatrices est supérieur à celui des non-utilisatrices ( $\chi^2 = 10,02$ ; 1 dl,  $p < 0,001$ ).

Les autres facteurs d'ordre social, l'accessibilité aux moyens contraceptifs et les habiletés de prise de rôle, influencent l'usage de la contraception chez les filles seulement. Plus de 80% des jeunes révèlent connaître l'opinion de leur partenaire sur la contraception et donnent eux-mêmes leur opinion même si le partenaire n'est pas du même avis.

Les adolescents qui ignorent l'opinion de leur partenaire sur la contraception ( $\chi^2 = 17,66$ ; 2 dl,  $p < 0,0001$ ) et qui ne se prononcent pas sont davantage des non-utilisatrices.

En ce qui a trait à l'accessibilité aux moyens contraceptifs, 40% des adolescents croient que les jeunes ont plus de difficultés que les adultes à obtenir un moyen contraceptif. Les filles qui sont en désaccord avec cette croyance ont davantage utilisé elles-mêmes un moyen contraceptif ( $\chi^2 = 7,07$ ; 2 dl,  $p < 0,03$ ).

### *Influence des facteurs cognitifs*

Selon la troisième hypothèse, il n'y aura pas de différence significative d'un point de vue statistique entre les adolescents des deux sexes utilisateurs ou non de contraception quant à l'influence des facteurs cognitifs suivants: les habiletés cognitives telles la relation probabiliste et la capacité d'envisager des conséquences et des solutions; le sentiment de vulnérabilité à la grossesse; les connaissances; les coûts-bénéfices de la contraception et les bénéfices sexuels.

La capacité des jeunes à envisager des conséquences et des solutions ne semble pas influencer leur comportement contraceptif. Par contre, leur capacité d'établir une relation probabiliste semble influencer l'usage



contraceptif des garçons mais non celui des filles. En effet, les garçons qui croient que l'utilisation d'un moyen contraceptif n'est pas nécessaire si les relations sexuelles sont irrégulières s'avèrent davantage des non-utilisateurs ( $\chi^2 = 11,20$ ; 2 dl,  $p < 0,004$ ).

Le sentiment de vulnérabilité à la grossesse ainsi que les connaissances des adolescents des deux sexes au sujet de la reproduction et de la contraception, n'influencent pas leur comportement contraceptif. Le sentiment de vulnérabilité a été évalué par les croyances qu'une grossesse est impossible parce que les adolescents sont trop jeunes ou qu'ils se pensent stériles. La majorité des garçons et des filles sont en désaccord avec ces croyances.

En ce qui a trait aux connaissances, 59% des garçons et 46% des filles n'ont pu identifier correctement la période de fertilité du cycle menstruel et ce, quel que soit le type de contraception utilisé.

L'évaluation des coûts-bénéfices de la contraception se traduit par la perception du besoin qu'ont les adolescents d'utiliser un moyen contraceptif pour prévenir une grossesse. Ils ne croient pas que les moyens contraceptifs coûtent trop cher. Toutefois, leurs opinions sont partagées en ce qui concerne les risques de santé associés aux anovulants. Ces différents points de vue ne semblent pas influencer l'usage contraceptif.

Le dernier facteur cognitif que traite des bénéfices accordés aux activités sexuelles, semble influencer l'utilisation de contraceptifs seulement chez les garçons ( $\chi^2 = 12,12$ ; 2 dl;  $p < 0,002$ ). Près de 25% d'entre eux disent avoir des relations sexuelles en dépit du risque de grossesse et ce parce qu'ils le désirent.

### *Influence de l'âge*

D'après la quatrième hypothèse, il n'existe pas de différence significative d'un point de vue statistique entre les adolescents des deux sexes utilisateurs ou non de contraceptifs quant à l'influence de l'âge. Les résultats de l'étude montrent que l'âge influence l'usage de la contraception chez les adolescents des deux sexes (filles:  $\chi^2 = 29,09$ ; 8 dl,  $p < 0,0003$ ; garçons:  $\chi^2 = 25,65$ ; 8 dl,  $p < 0,001$ ). Chez les garçons, l'utilisation d'un moyen féminin augmente avec l'âge alors que l'utilisation d'un moyen masculin diminue. Le profil du comportement des filles se présente différemment. Les filles de 14 ans ont davantage utilisé un moyen masculin tandis que celles âgées de 15 à 17 ans ont plutôt fait usage d'un moyen féminin. Par ailleurs, le pourcentage des non-utilisateurs de la contraception ne diminue pas entre 14 et 17 ans bien qu'il soit variable entre les groupes d'âge.

## *Discussion*

Les adolescents et les adolescentes de cette étude représentent assez fidèlement l'ensemble des élèves fréquentant les écoles secondaires de la Commission des Ecoles Catholiques de Montréal (CECM). Les comportements sexuels et contraceptifs rapportés par les jeunes de l'étude se comparent assez bien aux résultats d'autres études (Légaré et Bérubé, 1985; Philliber, Mamerow et Jones, 1985). En effet ces travaux ont relevé que près de la moitié des jeunes s'engagent dans des activités sexuelles au cours de l'adolescence et que plusieurs d'entre eux ne font pas usage de contraception.

Selon les résultats de l'étude, les motifs sous-jacents à l'utilisation de la contraception à l'adolescence diffèrent quelque peu selon le sexe des jeunes. Chez les filles, leur capacité de s'affirmer, l'encouragement reçu de leurs parents et de leurs partenaires sexuels, l'acceptation de leur sexualité et leur foi en l'accessibilité aux moyens contraceptifs ont incité et leur foi en l'accessibilité aux moyens contraceptifs ont incité les adolescentes à utiliser la contraception. Chez les garçons, leur capacité d'affirmation de soi, l'encouragement de la part des parents et du partenaire sexuel à utiliser la contraception sont les facteurs qui ont le plus contribué à l'usage de moyens contraceptifs. De plus, les garçons conscients du risque de grossesse pour leur partenaire en même temps que favorables à l'usage de la contraception, sont de meilleurs utilisateurs.

Les filles qui disent éprouver de la culpabilité à la suite d'une relation sexuelle utilisent peu la contraception. Les résultats obtenus sont comparables à ceux de Gerrard (1982); Keller et Sack (1982). Ce sentiment n'ayant pas été rapporté par les garçons, il est plausible de croire que les garçons se sentent plus à l'aise d'exprimer leur sexualité que les filles (Urberg, 1982).

Ils est intéressant de constater que l'affirmation de soi vis-à-vis la contraception s'exprime différemment selon le sexe de l'adolescent. Ainsi, la gêne rapportée par les filles est un prédicteur de non-utilisation de la contraception. Par contre, chez le garçon la gêne favorise l'utilisation d'un moyen masculin. Dans un sens, les garçons de l'étude manifestent leur affirmation puisqu'ils utilisent eux-mêmes un moyen contraceptif plutôt que de laisser cette initiative à leur partenaire ou encore d'avoir une relation non-protégée.

Les résultats concernant l'étude des facteurs sociaux démontrent que lorsque les parents sont informés de l'activité sexuelle de leur fille ou de leur fils, ils favorisent positivement l'usage contraceptif. Certaines études ont rapporté des résultats similaires (Furstenberg, Herceg-Baron, Shea et Webf,

1984; Jorgensen, King et Torrey, 1980). Par ailleurs, comme les filles sont davantage encouragées par leurs parents à utiliser la contraception que les garçons, il est plausible que les parents voient moins la nécessité de préparer leurs garçons à leurs responsabilités en matière de contraception (Scales et Beckstein, 1983). L'influence du partenaire sexuel comme prédicteur de l'utilisation de la contraception chez les adolescents des deux sexes et supportée par Cohen et Rose (1985) ainsi que Thompson et Spanier (1978).

Les difficultés perçues par de nombreux garçons de l'étude (81/198; 40.9%) envers l'accessibilité aux moyens contraceptifs reflètent sans doute le stéréotype voulant que la contraception soit réservée aux adultes et aux gens mariés (Pettigrew, 1985). En ce qui a trait aux filles, les résultats démontrent qu'une perception positive de l'accessibilité aux moyens contraceptifs est liée à l'utilisation de la contraception. Ce comportement peut s'expliquer en partie par le fait que les filles ont déjà tenté de se procurer un moyen contraceptif. Les résultats révèlent également que de bonnes habiletés de prise de rôle influencent positivement l'usage de la contraception chez les adolescents. En effet, il apparaît logique que les jeunes connaissent l'opinion de leur partenaire sur ce sujet, qu'ils se sentent libres d'en discuter et de dire franchement ce qu'ils pensent entre eux. Polit, O'Hara et Khan (1985) rapportent les mêmes constatations. Ces auteurs ajoutent cependant que les discussions sur la contraception sont insuffisantes en elles-même pour inciter les jeunes à utiliser la contraception.

Les résultats relatifs à l'influence des facteurs cognitifs sur l'utilisation de contraception montrent des différences significatives d'un point de vue statistique en ce qui a trait aux garçons. Plusieurs garçons affirment qu'une grossesse chez leur partenaire les dérangerait beaucoup au point d'évaluer d'autres alternatives que de garder l'enfant. Les garçons croient à la nécessité d'utiliser un moyen contraceptif pour éviter la grossesse. Ces résultats soulèvent la question des différences possibles entre garçons et filles dans le développement d'habiletés cognitives. Pour ce qui est du peu de connaissances constaté chez nos jeunes des écoles secondaires en matière de sexualité et de contraception, plusieurs études ont rapporté des résultats semblables (Gagné et Frappier, 1981; Smith, Weinman et Mumford, 1982; Sorensen, 1973; Zelnick et Kantner, 1977).

## ***Conclusion***

Cette recherche a permis de cerner l'influence de certains facteurs psychosocio-cognitifs sur l'utilisation de la contraception par des adolescents de niveaux secondaires III, IV et V. Les résultats conduisent à réévaluer l'approche de l'éducation sexuelle auprès de cette population-cible. Jusqu'à maintenant, l'approche utilisée a surtout tenté de renseigner les adolescents.

L'éducation sexuelle devrait inclure des objectifs visant le développement d'habiletés de communication, d'affirmation de soi et de clarification des valeurs et des attitudes des jeunes en matière de sexualité et de contraception. Si les non-utilisateurs demeurent des non-utilisateurs comme nos résultats l'indiquent, il serait approprié d'identifier ces jeunes au début de leur vie sexuelle et de privilégier une relance afin de diminuer les risques de grossesses non désirées. Le rôle joué par les parents est une autre dimension à renforcer. En effet, selon nos résultats, ils jouissent d'un statut privilégié vis-à-vis l'éducation en matière de contraception.

De par sa formation, l'infirmière possède les connaissances et les habiletés nécessaires pour aider les adolescents aux points de vue biopsychosocial. Ses interventions auprès des jeunes peuvent leur permettre de mieux vivre leur sexualité et son corollaire, la contraception.

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## **ABSTRACT**

### **The influence of psycho-socio-cognitive factors on the use of contraceptives during adolescence**

An increase in premarital sex associated with a continually lowering rate in the use of contraceptive methods among teenagers have led the authors to undertake a correlational study to determine the influence of selected psychological, social and cognitive factors on the use of contraceptives during adolescence. A sample of adolescents (509 girls and 563 boys) was selected randomly from six urban high schools of the greater Montreal area. Sexual and contraceptive profiles of these adolescents revealed that 41.3% of the boys and 38.6% of the girls were sexually active. Among sexually active teenagers, more than 70% had used a contraceptive when having their first sexual intercourse. The use of contraceptives among the female subjects depended to a greater degree on psychological and social factors, whereas, for boys, cognitive and social elements were the dominating factors.

The results of this research demonstrate the importance of proposing more creative ways of teaching and a more active role of nurses with young teenagers. The very young age at which the teenagers begin their sexual life is a major indication that counseling on sexuality and contraception should involve more clarification of knowledge and feelings for this target group.



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