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CONTENTS — TABLE DES MATIÈRES

EDITORIAL

In 1936, Hans Selye published a letter to the editor of *Nature* stating that stress was a "syndrome produced by diverse noxious agents" (p. 32). The agents were described as cold, heat, radiation, muscular exercise and specific diseases. This simple conceptualization of stress as a cause-effect relationship was sufficient to engender interest in the research of stress. However, in 1955, after Selye addressed the American Psychological Association meeting, the research interest in stress deepened and diversified. Stress was no longer viewed from just a medical perspective, but was also recognized as having psychological and sociological components.

Presently, many disciplines ranging from the behavioural sciences to philosophy are studying stress (Selye, 1976). The study of this subject has resulted in well over 100,000 publications and investigation at the biological, psychological, interpersonal and sociocultural levels. Many paradigms of stress have been developed, from Selye's early conceptualization of stress as a response syndrome to Lazarus' view of stress as a transaction occurring between people and their internal and external environments (Jacobson & McGrath, 1983).

Why haven't nurses pursued research in the area of stress with the same vigour as their colleagues in other health-related disciplines given the high interest of scholars and the laity in stress and evidence of a well established research base? Furthermore research on stress may be done in multiple settings, many contexts, and in all areas of nursing whether they be education, practice or administration. Copp (1981) suggests that there is stress in doing research on stress. Stress as a field of study is very broad, poorly defined, subjective and constantly evolving. The concept of stress also goes hand-in-hand with that of coping which is the ability to adapt to stress. Simply stated, the researcher asks where does one begin?

Probably the best place for nurses to begin researching is at the bedside. Nurses need to research stress as it relates to nursing practice (as has been done by Joachim in this issue). The data base for such research is abundant, accessible and measurable, and it lends itself to both qualitative and quantitative research methodologies. It would also seem prudent for nurses to initiate collaborative research projects with other disciplines since the care of the patients is shared with other professionals.

The contributors to this edition need to be congratulated. The awesome task of doing research on stress and thereby creating stress for themselves did not deter them. In fact they coped.

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ÉDITORIAL

En 1936, Hans Selye faisait parvenir à la revue *Nature* une lettre dans laquelle il déclarait que le stress était un "syndrome provoqué par divers agents nocifs" (p. 32). Les agents en question étaient le froid, la chaleur, les radiations, l'exercice musculaire et certaines maladies. Cette simple conceptualisation du stress comme un rapport de cause à effet suffit à donner un nouvel essor aux recherches sur le stress. Toutefois, en 1955, après que Selye eut pris la parole devant les membres de l'American Psychological Association, cet intérêt devint plus profond et plus diversifié. Le stress n'était plus vu sous un angle purement médical, mais on admettait qu'il avait des éléments psychologiques et sociologiques.

A l'heure actuelle, bon nombre de disciplines qui vont des sciences behaviorales à la philosophie s'intéressent au stress (Selye, 1976). L'étude de ce sujet a donné naissance à plus de 100 000 publications et études sur les aspects biologiques, psychologiques, interpersonnels et socioculturels du stress. On a élaboré bon nombre de paradigmes du stress depuis la conceptualisation de Selye qui voit dans le stress un syndrome de réaction, jusqu'à la théorie de Lazarus pour qui le stress est une transaction entre les gens et leur milieu interne et externe (Jacobson et McGrath, 1983).

On peut se demander pourquoi les infirmières n'ont pas poursuivi des recherches dans le domaine du stress avec le même dynamisme que leurs collègues d'autres disciplines liées à la santé, étant donné l'intérêt profond des chercheurs et des profanes pour le stress et la preuve d'une base de recherche solidement établie. De plus, les recherches sur le stress peuvent se faire dans des cadres multiples et dans tous les domaines des sciences infirmières, qu'il s'agisse d'enseignement, de pratique ou d'administration. Copp (1981) estime que les recherches sur le stress sont elles-mêmes stressantes. Le stress en tant que champ d'étude est un domaine vaste, mal défini, subjectif et en mutation constante. La notion de stress va également de pair avec celle de *coping* (composer avec) qui est la capacité de s'adapter au stress. Bref, le chercheur se demande par où commencer.

L'endroit le mieux indiqué pour entreprendre ces recherches est véritablement le chevet des malades. Les infirmières doivent étudier le stress dans la mesure où il se rapporte aux sciences infirmières (comme l'a fait Joachim dans ce numéro). Les données de base relatives à ces recherches sont abondantes, mesurables et d'accès facile et elles se prêtent fort bien à des méthodes de recherche à la fois qualitatives et

quantitatives. Il semble également que les infirmières ont intérêt à entreprendre des projets de recherche en collaboration avec des spécialistes d'autres disciplines, étant donné que le soin des malades est une activité partagée avec d'autres professionnels.

Nous tenons à féliciter les personnes qui ont collaboré à ce numéro. La tâche imposante qui consiste à entreprendre des recherches sur le stress et ainsi s'exposer au stress ne semble pas les avoir dissuadées. En fait, elles ont fort bien "composé avec" la situation.

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THE EFFECTS OF TWO STRESS MANAGEMENT TECHNIQUES ON FEELINGS OF WELL-BEING IN PATIENTS WITH INFLAMMATORY BOWELL DISEASE

Gloria Joachim

This paper describes a pilot project designed to assess the effects of two stress management techniques — deep abdominal breathing and massage — on feelings of well-being in a sample of outpatients with inflammatory bowel disease. Inflammatory bowel disease (IBD) incorporates ulcerative colitis and Crohn's disease (Anderson, 1982). IBD is a chronic gastrointestinal disorder which occurs in periods of remission and exacerbation. While stress as an antecedent to IBD remains controversial, the symptoms of IBD such as diarrhea, abdominal pain, and weight loss are stress producing. The problems are chronic and last the duration of the person's life.

Two questions arise:

1. Do stress management techniques promote feelings of well-being among the patients and enable them to better cope with the symptoms of their disease?

2. Does performing stress management techniques alter the degree to which a person perceives a situation as stress producing or promote better ways that an individual could cope with stressful events?

An uncontrolled pilot study was begun to examine the effects of deep abdominal breathing and massage on four categories of well-being in a sample of 15 IBD patients. The intent of the researcher was to design and carry out a pilot study in order to determine whether or not a complete investigation into the relationship between practising stress management techniques and feelings of well-being in IBD patients was warranted.

LITERATURE REVIEW

A review of literature under the headings of inflammatory bowel disease, stress, and stress management techniques is summarized.

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Inflammatory Bowel Disease

IBD is a chronic gastrointestinal disorder. The manifestations of IBD are often severe and affect most aspects of a person's life. The cause of IBD is unknown but various etiological agents have been suspect. These include genetic factors (Cullen, 1982), injurious substances (Beck, 1982), hypersensitivity of the individual (Goodacre, 1982), viruses, bacteria (Baker, 1982), and infectious agents (Tyrell, 1982).

In the past, emotional immaturity and psychological turmoil were thought to cause IBD (Engel, 1955; Fullerton, Kollar, & Caldwell, 1962; Lindeman, 1949; Paulley, 1950; Sperling, 1959). These assumptions now appear controversial when psychological factors in the IBD population have been compared to various control groups (Feldman, Cantor, & Soll, 1967; Monk, Mendeloff, Siegel, & Lilienfeld, 1970; Mendeloff, Monk, Siegel, & Lilienfeld, 1970). While this recent evidence indicates that stress may not cause IBD, the disability caused by bouts of diarrhea, urgency of defecation, abdominal pain, weakness, and weight loss, are worrisome and stress producing (Mallett, Bingley, Lennard-Jones, & Gilon, 1978). In their study of 84 IBD patients attending a hospital clinic, Mallett et al. (1978) discovered that 72 of the patients found their social life interrupted, two-thirds had to change their work routine, and half of the patients reported generalized irritability with their family to be a problem during an attack.

Stress

The effects of stress on the body have been documented. Selye (1976) describes the pathophysiology of stress as follows. A person reacts to a perceived physical, internal or psychosocial stressor by activating a sympathetic nervous system reaction. The hypothalamus and pituitary become involved and produce secretions from the adrenal cortex and adrenal medulla. From the adrenal cortex, mineral corticoids which are proinflammatory and cause sodium retention and protein anabolism, are released. Glucocorticoids are released which then cause protein catabolism and gluconeogenesis. While the adrenal medulla secretes norepinephrine, a peripheral vasoconstrictor which decreases blood flow to the kidneys, epinephrine which causes tachycardia, bronchial dilation and increased metabolism is also released. In the gastrointestinal tract, the proinflammatory response may be a cause of gastrointestinal disturbances and inflammatory conditions.

Selye (1976) proposes a General Adaptation Syndrome response to stress that occurs in three stages. First, an alarm reaction occurs that causes enlargement of the adrenal cortex, enlargement of the lymphatic system and an increase in hormone levels. The second stage is resistance in which there is shrinkage of the adrenal cortex, a reduction in the size of the lymph nodes, and a sustained level of hormones present. While these two stages occur continuously during the life of a person, if the individual for any reason cannot achieve resistance, exhaustion, in which the lymphatic system enlarges and does not work properly, occurs. If exhaustion results, there is also an increase in hormone level and a depletion of adaptive hormones. In terms of coping abilities, physiological and psychological behaviours may become maladaptive.

Stress Management Techniques

On the basis of previous work by the author investigating the effects of five stress management techniques on patients with IBD, the techniques chosen for use in this study were deep abdominal breathing and massage.

Lum (1977) states that chronic anxiety in patients results from the diagnosis of a serious condition and from patients continuing to have distressing symptoms that physicians have been unable to thoroughly treat. IBD falls both categories. Lum describes the fight or flight response in terms of breathing and suggests that to deal with anxiety, patients should learn how to perform relaxation techniques, become aware of improper breathing, and convert thoracic breathing to abdominal breathing. In this study, 700 patients were taught to become more aware of their breathing and to become abdominal breathers. Lum concluded that two-thirds of the patients in his study were cured of their anxiety symptoms and of the other third most developed symptoms of anxiety only in association with severe stress. Less than five percent showed no improvement at all.

Stewart (1976), a childbirth educator, states that practising rhytmic breathing leads to a decreased perception of pain, promotion of physical and mental well-being, an ability to maximize the benefits from rest periods, deeper night time sleep and a release of body tension which cause cramped muscles and produce fatigue. Stewart gave specific instructions for learning how to perform rhytmic breathing. French and Tupin (1974) described five cases which documented the effects of relaxed breathing on patients with serious medical problems. When the patients achieved relaxed breathing, they were encouraged to experience a pleasant memory. The authors found that patients

reported relief from sleep disturbance, a decreased awareness of moderately severe pain and a partial relief of depression often associated with long term medical problems.

Schulte and Abhyanker (1979) describe the mental changes that accompany changes in respiratory status. While hyperventilation produces respiratory alkalosis, controlled slow respiration causes carbon dioxide accumulation which stimulates cerebral circulation, produces mental tranquility and decreased sympathetic activity in the Autonomic Nervous System. The deep abdominal breathing they describe seems to initiate a biofeedback-like control of physiology. The authors suggest further study into the relationship of some yogic practices and psychophysiologic problems.

Udupa, Singh and Settiwar (1975) reported the effects on six normal subjects of a six month course of yogic deep abdominal breathing. Effects included a developing stabilization of respiratory functions and accelerated adrenocortical functions. The accelerated adrenocortical functions may produce differing degrees of stress competence among the subjects.

Massage has been defined as "a group of systematic and scientific manipulations of body tissue which is best performed with the hands for the purpose of affecting the nervous and muscular system and general circulation" (Krusen, Kottke, & Elwood, 1971). Sedation, a physiological effect of massage, is achieved by reflex effects in the skin caused by stimulation of the peripheral receptors which transmit impulses through the spinal cord to the brain (Krusen et al., 1971).

In Chinese medicine massage has been used in the treatment of some illness. Through massage, the Yin and Yang energy pathways are thought to achieve balance and augment the body's ability to fight disease (Theil, 1975).

The effects of therapeutic touch as a means of relieving pain have been documented (Boguslawski, 1980). Although the mechanism has not been clearly explained, it has been shown that also associated with pain relief is a sense of well-being, restfulness and an increase in coping abilities (Boguslawski, 1980). While therapeutic touch and the transmission of human energies will not be dealt with in this paper, it is possible that patients could experience some of the benefits of therapeutic touch as a result of traditional massage.

Longworth (1982) suggests that slow stroke back massage may reduce muscle tension through tactile sensation and also by inhibiting the muscle spindle due to the passive stretch by the massaging hand on the tendinous insertion of the muscles. In her study of 32 healthy normotensive female subjects, Longworth massaged the back of each subject for six minutes. Significant decreases in blood pressure and heart

rate were found. Both skin temperature and galvanic skin response increased. The results of a pre and post state trait anxiety inventory showed that her subjects perceived slow stroke back massage as relaxing.

While noting that little work has been done in this area, Woody (1980) describes five cases in which he gave each person the Sixteen Personality Factors Test and/or the Minnesota Multiphasic Personality Inventory. Then each person completed an anxiety measurement test — the IPAT Eight Parallel Form Anxiety Battery. Each person was then given a one hour body massage. Approximately one hour after massage, each subject again completed an anxiety measurement test. After four sessions all of the five cases demonstrated lower anxiety scores.

METHODOLOGY

Patient eligibility criteria for this study included a diagnosis of IBD made on the basis of endoscopic or radiological findings, no additional medical problems, and a spoken command of the English language.

A sample of 15 outpatients was randomly collected from the files of a consenting gastroenterologist. Patients were contacted by phone, informed about the pilot project and an interview time was set up. At the interview, each patient signed a consent form which stated that he would be taught the techniques over four weekly sessions, that pre and post interview data would be collected, and that he would be free to withdraw from the project at any time without his care being affected. Physician consent for the patient to participate in the project was also obtained. Assessment data were then collected by a research assistant. (See Appendix).

The patients involved in this study were between the ages of 18 and 45 years, had been diagnosed with IBD for over two years and had been hospitalized at least once for IBD. Presently, all were maintained outside the hospital although several reported experiencing difficulty with IBD symptoms, and one patient stated that he was umemployed due to his problem with IBD.

At the beginning and end of each teaching session, pulse and blood pressure were taken and recorded. Patients were taught the techniques of deep abdominal breathing by the same assistant who had interviewed them. Each patient was given half an hour to learn the technique. Patients were taught to inhale deeply through the nose encouraging the absominal area to relax and balloon out with air. Following a pause, they were told to exhale completely through pursed lips. They

were told that practising this technique would lead to a feeling of warmth in the abdominal area. The patients were instructed to practise deep abdominal breathing a minimum of twice a day and told that they could practise in any setting. Compliance with these instructions was difficult to assess.

Following deep breathing, each patient was given a 45 minute massage. Little talking was done during the massage and patients were encouraged to think about deep abdominal breathing as they relaxed. The patient was placed in the prone position. His back, neck, and shoulders were massaged using techniques of effleurage, petrissage, and friction (Joachim, "Step by Step Massage," 1983). The hands and feet were massaged using the same techniques (Joachim, "How to Give Foot Massage," 1983). In both the hands and feet, tense clenched areas were massaged open and each finger and toe worked in a corkscrew fashion. Following the massage, patients were encouraged to think about how they were feeling and not to get up to leave until they were ready.

The second, third, and fourth visits were spent reviewing and practising deep breathing. All sessions ended with a 45 minute massage. At the conclusion of the fourth session, an interview appointment was scheduled to be held in two weeks. At the interview, the same baseline data were collected by the researcher. In addition, the following questions were asked:

1) Which of the techniques helps you to feel more relaxed?
2) Which technique, if any, are you using more to achieve relaxation? Why?

RESULTS

With the exception of the pulse and blood pressure information, data from the patient interview were sorted into four categories of well-being and the additional two questions examined for trends. Of the original fifteen patients in the sample, one did not complete all of the sessions. This patient failed to return after the first session. The categories of well-being identified were:

1) Increased ability to sleep
2) Increased feelings of control over pain
3) Increased awareness of the difference between feeling stressed and feeling relaxed
4) Increased ability to calm themselves.

Pulse and blood pressure were monitored before and after each treatment for every patient. The pulse rate of all subjects decreased from 5 to 20 points per minute following each session. At the start of each session, patient pulse rates ranged from 58-110. Those with the highest rates dropped the most.

Blood pressure readings were more variable. Readings prior to beginning the sessions ranged from 90/60 to 130/84. Following each session systolic blood pressure readings rose a few points and some dropped a few points. The diastolic readings remained fairly constant. No patterns of change or changes greater than six points in the systolic readings were noted.

TABLE 1

Number of Subjects Improved in Each Category (N=14)

Category	Number of subjects improved
Increased ability to sleep	9
Increased feelings of control over pain	9
Increased awareness of the differences between feeling stressed and feeling relaxed	14
Increased ability to calm themselves	13

The Categories of Well-being

Increased ability to sleep

Nine patients demonstrated an increased ability to sleep. Of the nine, four patients reported being able to fall asleep more quickly using deep breathing than without the technique. The other four patients said that while they had not experienced difficulty falling asleep, they often woke during the night. These patients reported that deep breathing enabled them to return to sleep more quickly than before. One patient said that she continued to have occasional difficulty falling asleep, but felt that she could help relax herself while trying to sleep by thinking about the relaxed feeling that she experienced during massage.

Of the five patients who did not demonstrate an increased ability to sleep, three stated that they never had problems sleeping, and therefore the techniques made no difference to them in terms of affecting their ability to sleep. Two of these patients took sleeping medica-

tion every night and while one of them said that he felt that deep breathing helped him to fall asleep faster, the other noticed no difference in her ability to sleep.

Increased feelings of control over pain

Five of the patients reported that they experienced no pain during the course of the study. Of the remaining nine patients, all of them stated that they felt more in control of pain. The following data were obtained from these nine. Six patients said that deep breathing took the "sharp" and "stabbing" sensations away from the experience of pain. Even though these patients were still aware that pain was present, they said that they felt more in control because they could do something about its severity. One patient commented that focusing on her breathing distracted her from the pain experience and therefore made the pain seem less severe.

Two patients had taught massage to a significant other and asked for and received massage when they experienced pain. These patients said that massage during pain acted as a distractor and a soother to help them cope with pain.

Five of the patients stated that they reduced their pain medication as a result of using the techniques. One patient eliminated all pain medication during the study and others reported taking up to a quarter of their previous doses. All of the nine patients who experienced pain during the study stated that they noticed a relationship between the ability to relax and a decrease in their perception of pain.

Increased awareness of the difference between feeling stressed and feeling relaxed

All 14 of the patients said that they had become more aware of the difference between feeling stressed and feeling relaxed. Eleven of them said that massage gave them a more relaxed feeling than they had ever experienced before. Three patients said that they had previously achieved this feeling through the use of a sleeping pill. One patient said that he had been able to achieve the relaxed feeling that massage gave him through another route but refused to say what that route was. One patient reported that although she was more aware of a difference between feeling stressed and feeling relaxed, she still had difficulty allowing herself to relax. All 14 of the patients commented on their awareness of a change in muscular tension, particularly in the neck and shoulders following massage. Ten of the 14 patients said that they would like to be sure that they experienced this pleasant sensation more often. These patients planned to practise being aware of the differences between tension and relaxation on an ongoing basis.

Increased ability to calm themselves

Thirteen of the patients reported that they felt they were better able to calm themselves than they were previously. No patients were taking anti-anxiety medications during this study. While seven of the 13 patients thought about the relaxed feelings that came from massage, all 13 of them practised deep breathing when wanting to induce the calm feeling.

Patients reported that the degree to which they could calm themselves was related to the situation they were in. One patient reported being able to calm herself during a bus ride which had previously made her anxious because of the unavailability of a toilet. The same patient found it more difficult to calm herself on a visit to her gastroenterologist. Another patient asked a clinic nurse to give him a back massage prior to his sigmoidoscopy. During the test, he practised deep breathing. This patient reported feeling able to calm himself by asking for something that he knew would help and practising a technique that was useful to him. He noted feeling more in control of himself both emotionally and physically.

The one patient who did not rate an increased ability to calm herself, stated that she had always been a very tense person and was unable to "allow herself to relax." She said that it was unclear to her how she could direct her focus away from worry.

TABLE 2

Usefulness of the Stress Management Techniques (N=14)

	Deep Breathing	Massage	None of the Techniques
Which of the techniques helps you to feel more relaxed?		14	
Which technique are you using more to achieve relaxation?	12		2

Which of the Techniques Helps You Feel More Relaxed?

All of the patients stated that massage was the technique that helped them feel more relaxed. Three patients compared the feelings that massage evoked as being like those attained through the use of a sleeping pill. One patient said that massage gave her feelings like those she

experienced in a whirlpool but that she experienced a "more intense" relaxation from massage. All of the patients said that massage relaxed both their bodies and minds.

Reports indicated that the length of time that the effects of massage lasted varied from patient to patient. The range was from one hour to two days. Eight of the patients said the effects lasted between two and six hours.

Twelve patients said that it was the dramatic relaxation effect of massage that made them most aware of the tension they felt much of the time. Awareness of the difference, they said, enabled them to achieve relaxation more quickly now. These patients said that even though the effects of massage were not lasting it was very valuable in helping them to recognize their need to relax. Five patients said that they would appreciate massage being given to them as part of their treatment whenever they visited their physicians or were hospitalized. These patients also commented on the value of massage as a distraction and tool to help them cope with pain.

Only one patient mentioned an initial discomfort at being touched during massage. She also said that the relaxing effects helped her to overcome her negative feelings during the first session.

Which Technique are You Using More to Achieve Relaxation?

Twelve of the patients said that they were using deep breathing more to achieve relaxation. These 12 patients cited deep breathing because it was the technique that they could do for themselves to feel in control. While some patients said that the effects of massage were more definitive, deep breathing was mentioned as being more useful because of their individual control, the short amount of time needed to achieve relaxation and the way in which deep breathing could be practised any place inconspicuously.

Patients also mentioned that deep breathing helped to relax the abdominal and pelvic muscles where they recognized tension to be held. Five patients said that deep breathing distracted them from worry and gave them a warm feeling in the abdomen. Two patients said that following deep breathing, their minds cleared and their thinking was improved. One patient attributed this to increasing the supply of oxygen to the brain.

Two patients said that they had been told to take deep breath during diagnosis tests but prior to the session did not understand how to do this. They said that they planned to do deep breathing during their next tests.

Of the two patients who were not using deep breathing more to achieve relaxation, one patient said that he was now talking about factors that caused him worry, and that the honest communication with his partner was the technique he used most to achieve relaxation. This patient said that she found it difficult to make the time to practise, had always been a tense person and found it very difficult to relax under any circumstance.

CONCLUSIONS

The prevalence of IBD patients within the general population is estimated at 90-300 per 100,000 (Mendeloff, 1980). A sample size of 15 patients has been randomly chosen as representing the population. From the data obtained from 14 of the patients in this study, it can be concluded that several patterns of response have been established. The majority of the patients demonstrated improvement in the categories of well-being, felt that massage was the technique that produced greater relaxation, yet actually used deep breathing more to achieve relaxation. It is interesting to note the patient reports that while massage promoted a greater degree of relaxation than deep breathing, deep breathing was the more used of the techniques.

From the results of this pilot study, it seems that further investigation into the relationship between practising stress management techniques and their effects on feelings of well-being in IBD patients is warranted. Use of a control group would give additional data. More stress management techniques could be added, tested and results compared. A longer period of study time with more follow-up interviews would give additional information.

Further study might be done in the area of stress prevention — that is, would deep abdominal breathing prevent tension and therefore could it be used before pain or stress related illnesses occur to prevent these maladies? The application of massage during the experience of pain might be investigated to determine its usefulness in decreasing the perception of pain while pain is occurring. An outcome of further study could be a program into the development of techniques focusing both on preventing stress and pain and on self-help pain relief.

The author is planning to study the development of new stress management techniques in patients with IBD. Special emphasis will be placed on the area of preventive measures and their effects in reducing the level of stress in the IBD patient.

APPENDIX: PRE AND POST INTERVIEW QUESTIONNAIRE

Patient Code Number

Current medications

Allergies

Pulse	Session I	Pre____	Session III	Pre____	
		Post____		Post____	
	Session II	Pre____	Session IV	Pre____	
		Post____		Post____	
Blood Pressure	Session I	Pre____	Session III	Pre____	
		Post____		Post____	
	Session II	Pre____	Session IV	Pre____	
		Post____		Post____	

1. Are respirations thoracic/abdominal? Thoracic__ Abdominal__
2. Describe your sleep and rest patterns:
3. Has your energy level changed recently? Yes____ No____
4. Do you experience pain? Yes____ No____
5. Where is your pain?
6. Rate your pain
   1 2 3 4 5
   little pain very severe
7. What is your body doing when you are under stress?
8. Do you have methods of dealing with your pain? Yes____ No____
9. What are your ways of dealing with pain?
10. Rate the effectiveness with which your methods help you to deal with pain
    1 2 3 4 5
    not effective very effective
11. Are you aware of stress in your body? Yes____ No____
12. Rate your awareness of the difference between stress and relaxation in your body
    1 2 3 4 5
    not aware at all very aware
13. What is your body doing when you are under stress?
14. What is your body doing when you are relaxed?
15. Rate the degree to which you are able to help yourself to relax
    1 2 3 4 5
    not at all very much

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RÉSUMÉ

Les effets de deux techniques de contrôle du stress en vue de favoriser le bien-être de malades atteints de troubles gastro-intestinaux

Ce projet pilote avait pour objet d'examiner les effets de deux techniques de contrôle du stress (profonde respiration abdominale et massage) en vue de favoriser le bien-être de 14 malades en consultation externe chez lesquels on avait diagnostiqué des troubles gastro-intestinaux. Même si l'on ignore le rapport exact qui existe entre le stress et les troubles gastro-intestinaux, on sait que les symptômes de ces troubles sont générateurs de stress. On a obtenu le consentement libre et éclairé des malades et l'on a rassemblé des données d'évaluation. On a enseigné aux malades les deux techniques au cours de quatre séances hebdomadaires. Lors d'une entrevue d'évaluation deux semaines plus tard, on a recueilli de nouvelles données que l'on a réparties en quatre catégories de bien-être. On a noté l'amélioration qui s'était produite dans ces quatre catégories. Tous les sujets ont évalué le massage comme la technique de relaxation la plus efficace même s'ils utilisaient plus souvent la technique de la respiration profonde. On a tiré des conclusions préliminaires et formulé des recommandations visant à approfondir cette étude.

PERCEPTIONS OF STRESS BY NURSES IN DIFFERENT SPECIALITIES: SOME IMPLICATIONS FOR NURSING ADMINISTRATORS

Peggy Leatt • Rodney Schneck

Many writers have suggested that nursing is an occupation which can be considered high stress (Clark, 1980; Hartl, 1979; Parkes, 1980a, 1980b). Nurses' continual and intermittent exposure to crisis situations and emotionally-charged work situations have made them key targets for stress reactions. Although nursing administrators have long recognized that excess stress may adversely affect nurses' performance and levels of job satisfaction, there has been very little empirical research investigating the exact, nature of work-related stress for nurses. The limited amount of research which has been done has tended to focus upon nurses working in critical care areas such as intensive care units (Gowan, 1979; Huckabay & Jagla, 1979). There have been no studies to our knowledge attempting to find out whether stress may also be experienced by nurses working in the more traditional nursing specialities such as medicine, surgery, obstetrics, pediatrics or psychiatry. It is possible, for example, that nurses working in these specialities may experience different kinds and qualities of stress from that of nurses working in emergency departments, operating rooms, and special care units which are generally thought to be more stressful.

Although a number of prescriptions are being advocated for how nursing administrators can help nurses handle stress provoking situations (see for example: Stillman & Strasser, 1980), it would seem that

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more research is yet needed to find out the exact nature and sources of stress for nurses working in a variety of specialities so that nursing administrators can tailor helping mechanisms appropriately according to the quantities and qualities of stresses being experienced.

STUDY OBJECTIVES

The data reported here were part of a larger research project aiming to investigate the applicability of a contingency model of organizational functioning to nursing departments in hospitals. Contingency theory suggests that there are a number of technological and environmental factors which may influence an organization's performance and the behaviour of individuals within the organization (see for example: Perrow, 1970). The model indicates that managers and administrators may design their organizational structures and processes in order to achieve optional effectiveness (see for example: Child, 1977). Indicators of optional effectiveness may include high job satisfaction, low turnover, low stress or strain for workers, and high quality of output relative to costs. There has been little research attempting to apply contingency theory to nursing units in hospitals. Our study included measurement of a range of technological, structural and behavioural variables in nursing units. Some of the initial findings have already been reported (Leatt & Schneck, 1981; 1982a; 1982b).

One of the most important behavioural variables we were interested in, for both practical and theoretical reasons, was the nature of stress being experienced in nursing units.

In analyzing nurses' stress the objectives were:

1. to identify the main sources of stress for nurses working in a variety of specialities,
2. to develop types (for categories) of stress,
3. to find out if there were differences in nurses' perceptions of stress across a variety of specialities, and
4. to examine whether nurses of different age, experience, education, and length of time working in their position differed in their perceptions of stress.

CONCEPTUALIZATION OF STRESS

One of the first researchers to study stress was Selye (1956) who conceptualized stress in terms of a specific state of the human biological system brought about by change in the environment. This early approach was primarily physiological, however, more recently a great deal of work has been done to examine stress from a social-psychological perspective (see for example: Beehr & Newman, 1978; Kasl, 1978; McGrath, 1976; Schuler, 1980). In particular, there has been growing interest in stress as an organizational phenomenon where the focus is upon the effects of the work place in inducing stress reactions from individual workers (see for example: Cooper & Payne, 1978).

It has been recognized that stress is a complex and imprecise concept with no universally accepted meaning among social and behavioural scientists (Schuler, 1980). In general, stress is viewed as an outcome of a rather complex interaction between an individual and his/her environment. Accordingly, for stress in organizations, sources of stress may be inherent in the characteristics of the individual as well as in the attributes of the work place. For nurses, this can mean that stress may be a result of the individual nurse and who he/she is, and the nursing unit, its climate, physical facilities, technology, and so on.

In addition, it has been acknowledged that stress may be essentially a perceptual phenomenon (McGrath, 1976); that is, it must be perceived in order for it to be experienced. In other words, if the person does not perceive any stress in his/her situation, even though objective indicators may suggest that the circumstances should be disturbing, then no stress will be experienced.

DEFINITION OF STRESS

For this study, stress was viewed from a social-psychological perspective and defined according to McGrath (1976) in terms of nurses' perceptions of their interaction with their environment. McGrath has suggested there is potential for stress in situations that make demands which threaten to exceed a person's capability of coping with them. In these situations the rewards for meeting the demands are weighed as greater than the costs of not meeting the demands.

This approach was in keeping with Mechanic's (1962) definition of stress as "discomforting responses of persons in particular situations when they are motivated to reduce or eliminate it" (p. 7).

From the organizational literature, it is possible to identify a wide range of events, conditions or places which may be potentially sources of stress for individuals in the work place (McGrath, 1976). Two of the most commonly discussed categories of events thought to induce stress are: 1) those associated with the *role* an individual plays in the work place; and 2) those related to the *tasks* the person must perform.

For this study, we initially focused on these two categories of sources of stress for nurses. First, those associated with the *role* nurses assume within the nursing team and as part of the larger health care team. Second, those associated with the *tasks* of nursing care that nurses perform in their work; these included potential stress associated with patients' health condition and prognosis, family well-being, nursing care and procedures, as well as stress associated with workload, leaving work unfinished and relieving or helping out in other specialities.

These specific items of potential sources of stress for nurses were generating on the basis of the nursing literature (for example: Gillis, 1973; Keck & Walther, 1977; Mauksch, 1966; Reichle, 1975; Reves, 1972; Strauss, 1975; West, 1975), as well as from interviews with nurses practising in different specialities. In total, 21 potential sources were identified which appeared to have both face and content validity. It was recognized that a number of these sources might be interrelated and may not be precisely classifiable as exclusively concerned with the *tasks* or the *role* of the nurse.

A questionnaire was developed which asked nurses to indicate their perceptions of the potential 21 sources of stress. In order to incorporate both a "psychological" (individual) and a "social" (work place) dimension of stress, questions were asked about the potential sources of stress in two ways. First, we asked the nurses to indicate how much stress they perceived was associated with the source. This assumed that if the individual perceived a great deal of stress associated with a particular source then it would generate a "disturbing" reaction for the individual. Second, the nurses were asked to indicate how frequently the stress situation occurred on their unit. This assumed that the circumstance, even if it was perceived as being very stressful, would not result in experienced stress for the individual unless it actually occurred in the work place. Accordingly, each nurse was asked to indicate how much stress he/she thought was associated with each source of stress by answering 'very little, a little, some, quite a bit or very much', and also to say how often the stress situation occurred by answering 'never, rarely, sometimes, often, always'.

Since we viewed experienced stress as the most complete measure of stress, the responses to the first part of the question (individual nurse's perceptions of the stressfulness of the event) were combined with the second part of the question (the frequency with which the event was perceived to occur). A stress score for each nurse was, therefore, calculated by multiplying the response to the first half of the question by the response to the second half (AMOUNT × FREQUENCY). Each part of the question was scored 1 to 5 which provided a composite stress score ranging from 1 to 25. Subsequent analysis was then done using the composite scores.

Question 1 (below) shows an example of a role-related stress question and questions 2 and 3 are task-related stress questions. Both parts of the responses are also illustrated.

1. How stressful is it if nursing staff are unable to satisfy the conflicting demands of various people (e.g., patients, physicians, other paramedical staff, etc.)?

	How often does this situation occur in your unit?	
_____very little stress	_____never	_____often
_____a little stress	_____rarely	_____always
_____some stress	_____sometimes	
_____quite a bit of stress		
_____very much stress		

2. How stressful is it if a patient is very ill and his prognosis is poor?

	How often does this situation occur in your unit?	
_____very little stress	_____never	_____often
_____a little stress	_____rarely	_____always
_____some stress	_____sometimes	
_____quite a bit of stress		
_____very much stress		

3. How stressful is it if the workload is so consistently heavy that the nursing staff lack energy for leisure activities?

	How often does this situation occur in your unit?	
_____very little stress	_____never	_____often
_____a little stress	_____rarely	_____always
_____some stress	_____sometimes	
_____quite a bit of stress		
_____very much stress		

The full list of questions is shown in a report by Leatt and Schneck (1980) where the results of an analysis of sources of stress for head nurses using the same questions are discussed.

SAMPLE

The data were collected in 1977 from 1253 nurses working in 24 hospitals in Alberta, Canada. The nurses were from 9 specialities as follows: 200 nurses from medical (MED) units; 269 from surgical (SURG) units; 106 from intensive care (ICU); 94 from rehabilitation (REHAB) units; 102 from chronic auxiliary (AUX) units; 191 from pediatrics (PEDS); 110 from psychiatry (PSYCH); 100 from obstetrics (OBS), and 81 nurses working in rural (RURAL) hospitals. The sampling process took place in several stages. First, we attempted to achieve a wide range of types of relatively common, yet specialized, units (n=9); second, we included all units of the selected types within each hospital at the discretion of the director of nursing (n=157); third, we included all nurses from each unit who were on duty day, evening, and night shifts on randomly selected data collection days. For each unit, there were on average 40% of the full complement of staff who participated.

The sample of nurses on each unit was stratified according to the ratio of professional to non-professional nurses within each unit; therefore over one third of the nurses were Registered Nurses (or Bachelor or graduate degrees). The rest of the participants were non-professional categories such as Registered Nursing Assistants.

RANKING OF SOURCES OF STRESS

In order to find out which stress situations were perceived by the nurses to be responsible for the most stress, the composite responses to the 21 questions were ranked according to the mean responses for all nurses. The results are shown in Figure 1. The single most stressful event for nurses as indicated by its highest ranking was WORKLOAD. Ranking closely second was stress associated with physicians not being available when they were needed, and third, stress resulting from insufficient resources. There was no distinct pattern in the order in which the stressful events were ranked but the need to relieve or help out on the same or other specialities ranked considerably lower than the other potential stressors indicating a relatively small amount of stress associated with this activity. The finding of WORKLOAD as the highest ranking stress event was in keeping with the findings of Huckabay and Jagla (1979) for intensive care unit nurses.

Rank	Stress	Mean	Standard Deviation	n
1	Workload	11.79	5.26	1251
2	MDs unavailable	11.35	4.24	1240
3	Insufficient resources	11.10	4.51	1251
4	Patient's behaviour	10.82	4.33	1242
5	Conflicts nursing	10.66	4.84	1244
6	Conflicting demands	10.57	4.4	1251
7	Patient's prognosis	10.42	4.13	1244
8	Family upset	10.33	3.98	1249
9	MDs not communicating	10.07	3.99	1242
10	Staffing	10.03	5.26	1248
11	Patients dying	9.83	4.43	1236
12	Insufficient knowledge	9.62	3.87	1241
13	MDs critical	9.28	4.03	1240
14	Leftover work	8.93	4.18	1253
15	Responsibilities unclear	8.73	4.0	1248
16	Care painful	8.43	3.94	1228
17	Patient's age	8.37	5.5	1171
18	Family not informed	8.23	3.69	1243
19	Crises	8.21	3.53	1227
20	Relieve different speciality	7.68	4.5	1225
21	Relieve same speciality	6.15	4.21	1212

Figure 1. Ranking of sources of stress. Mean composite scores (range 1 to 25).

TYPES OF STRESS

We were interested in finding out whether it was possible to identify distinct categories or types of stress for nurses. Factor analysis was used to attempt to summarize the 21 stress sources into groups. By using an oblique factor rotation we were able to describe four interrelated types of stress underlying the 21 sources of stress we had initially defined. This factor solution explained 61% of the variance in responses to the 21 items. The four types of stress were labelled ROLE CONFLICT, TASK DIFFICULTY, RELIEF WORK, and WORKLOAD.

As indicated by the high factor loadings in Table 1, the first category of stress, ROLE CONFLICT was primarily related to problems with nurses' interactions among themselves and with other members of the health team. Stressful situations included: when there

were conflicting demands, responsibilities were unclear, nurses had insufficient knowledge or resources to do their job, physicians were not available or not communicating, and physicians were very critical of nurses' work.

TABLE 1

Types of Stress
(Factor analysis — oblique factor structure)

SOURCES OF STRESS	ROLE CONFLICT	TASK DIFFICULTY	RELIEF WORK	WORKLOAD
Insufficient resources	0.55	−0.31	0.09	0.51
Conflicting demands	0.59	−0.36	0.12	0.48
Responsibilities unclear	0.61	−0.25	0.12	0.34
Insufficient knowledge	0.59	−0.29	0.06	0.38
MDs critical	0.72	−0.29	0.26	0.17
MDs unavailable	0.71	−0.28	0.25	0.17
MDs not communicating	0.75	−0.38	0.22	0.19
Patient's prognosis	0.28	−0.79	0.04	0.25
Care painful	0.32	−0.75	0.14	0.17
Family not informed	0.37	−0.62	0.24	0.21
Family upset	0.39	−0.71	0.13	0.30
Patients' dying	0.22	−0.79	0.05	0.37
Crises	0.36	−0.55	0.32	0.35
Relieving same speciality	0.15	−0.15	0.80	0.20
Relieving different speciality	0.27	−0.14	0.83	0.05
Patient's age	0.12	−0.36	−0.09	0.56
Staffing	0.34	−0.25	0.36	0.67
Workload	0.34	−0.40	0.11	0.77
Leftover work	0.39	−0.36	0.88	0.56
Nursing conflicts	0.46	−0.12	0.20	0.58

The second category of stress was concerned with TASK DIFFICULTY; for example, when patients had poor prognosis and/or were dying, nursing care involved pain for the patient, and there were many crises. There was also stress when patients' families were upset and uninformed about their relatives' conditions.

The third type of stress of RELIEF WORK was distinct from the other types and focused upon stress associated with the need to relieve or help out in other units or specialities.

The fourth category, stress from WORKLOAD, included situations when there were staffing problems, leftover work by shifts, personality disagreements among the nurses, and heavy workload itself. Also associated was the extent to which elderly patients were part of the patient group.

The four types of stress were found to be interrelated, suggesting that there was no single stressor or category of stress for nurses but a number of interrelated situations which could provide stress. For example, the stress associated with the nurse's ROLE CONFLICT was relatively highly correlated with all three other types of stress (Table 2).

TABLE 2

Correlations Among Types of Stress (n=1055)

	TASK DIFFICULTY	RELIEF WORK	WORKLOAD
ROLE CONFLICT	0.37	0.26	0.35
TASK DIFFICULTY		0.14	0.35
RELIEF WORK			0.12

All relationships were significant at 0.01 level (probably due to the large sample size).

VARIATIONS IN STRESS FOR NURSES IN DIFFERENT SPECIALITIES

It was expected that nurses in different specialities would perceive different types of stress as well as stress of varying levels of intensity. In order to test this, factor scores for each of the four types of stress (ROLE CONFLICT, TASK DIFFICULTY, RELIEF WORK, WORKLOAD) were calculated for each nurse. Analysis of variance was used to find out if there were differences between nurses working in the nine different specialities in terms of their perception of the four types of stress. Some differences were statistically significant at 0.05 level. The results are shown in Table 3.

TABLE 3

Ranking of Nurses from Different Specialities on Stress Types

n=1055

	Low								High
ROLE CONFLICT	PSYCH	AUX	MED	RURAL	OBS	SURG	REHAB	PEDS	ICU
	−0.25	−0.16	−0.13	−0.11	0.01	0.03	0.04	0.23	0.38
TASK DIFFICULTY	OBS*	PSYCH	REHAB	SURG	PEDS	RURAL	AUX	MED	ICU*
	−0.38	−0.53	−0.29	−0.05	−0.01	0.08	0.16	0.38	1.09
RELIEF WORK	RURAL	AUX	ICU	PSYCH	REHAB	MED	SURG	OBS	PEDS*
	−0.48	−0.32	−0.19	−0.17	−0.16	−0.09	0.06	0.18	0.69
WORKLOAD	PEDS	OBS	PSYCH	SURG	ICU	MED	RURAL	REHAB	AUX*
	−0.51	−0.34	−0.25	−0.01	0.04	0.11	0.14	0.18	0.90

* Indicates nurses in this type of unit were significantly (0.05) higher or lower than the nurses for all other types of units.

In terms of stress associated with nurses' ROLE CONFLICT the nurses from the intensive care units ranked highest followed by pediatric care units second highest. The findings indicated that nurses from these specialities perceived considerable stress from their relationships with physicians, from conflicting demands, insufficient resources and knowledge, and from responsibilities being unclear. Nurses from psychiatry and auxiliary units ranked lowest in this type of stress.

For stress from TASK DIFFICULTY, the nurses from the intensive care units perceived more stress than nurses from all the other specialities and obstetrical nurses less than all other nurses. Clearly, this type of stress for the intensive care unit nurses seemed to stem from patients with poor prognosis and/or dying, care being painful, many crises and families being uninformed or upset. These kinds of situations were, of course, less likely to occur for obstetrical nurses.

RELIEF WORK stress, from relieving on other units, was perceived as more stressful by pediatric nurses than by any other group. It is not possible to tell from this analysis whether the stress was perceived because of pediatric nurses' discomfort when needed to work with adults as opposed to children or whether the situation of having to relieve or help out on other units did not occur frequently for pediatric nurses.

WORKLOAD stress was perceived significantly greater by nurses working in chronic auxiliary settings than by nurses working in any other speciality. These nurses indicated more stress from staffing problems, workload, left over work from shift to shift, nursing conflicts, and so on.

EFFECTS OF NURSES' EDUCATION, AGE, EXPERIENCE AND LENGTH OF TIME ON THE JOB

Although it was not feasible to do comprehensive analysis of the effects of nurses' personal characteristics on their perceptions of stress because of limitations of the study design, some initial exploration was possible.

For example, in terms of education, we found that Registered Nurses (or greater qualifications) perceived more stress from ROLE CONFLICT and from TASK DIFFICULTY than did the persons from nonprofessional categories. This may have been related to the fact that more Registered Nurses tented to be employed in the high stress specialities such as intensive care units and pediatrics. The nurses' level of education, however, was unrelated to their perceptions of stress from RELIEF WORK and WORKLOAD.

The length of time a nurse has been emloyed in the position showed no relationship to the nurses' perceptions of any of the four types of stress. Younger nurses and those with less experience tended to show more stress from ROLE CONFLICT and TASK DIFFICULTY but the relationships were not strong.

This finding may also have been related to the possibility that younger nurses tend to be attracted to certain specialities, especially intensive care units.

CONCLUSIONS AND IMPLICATIONS FOR NURSING ADMINISTRATION

The findings from this research suggested that the highest source of stress for nurses across nine types of specialities was their WORKLOAD. This result was in keeping with the other research which has considered only the stress of nurses in high technological specialities such as intensive care. The finding suggests that nursing administrators should keep in tune with the workload being encountered by all nurses and perhaps find ways of interpreting lack of resources or reasons for reallocation of resources to individual nurses. The second most important source of stress identified by the nurses was that occurring when physicians were not available when needed. This would imply an important role for nursing administrators as part of the management team to interpret to physicians and other health care workers the critical importance of their presence and availability to the patient care areas.

It was possible to identify four types or categories of stress as perceived by the nurses and also to describe differences in ranking of the nurses from the various specialities on the four types. Clearly, nurses from intensive care units perceived considerable stress from ROLE CONFLICT and from TASK DIFFICULTY; however, it was interesting that nurses from the other specialities also perceived a relatively large amount of certain types of stress and in some instances, more than intensive care nurses experienced. For example, pediatric nurses reported considerable stress from ROLE CONFLICT and from RELIEF WORK. Medical nurses reported relatively high stress from TASK DIFFICULTY. Auxiliary (chronic care) nurses perceived the greatest amount of stress from WORKLOAD. Psychiatric nurses ranked relatively low on their perceptions of all four types of stress.

In keeping with the contingency model of organizations, these findings of differences in nurses' perceptions of stress across the various specialities could have implications for the organization and management of nursing departments. For example, different specialities may call for different personnel selection criteria and other personnel policies. Also, different leadership styles may be required in order to assist the nurses in handling the varieties of stress or in coping with them. Unit organizational structures may need designs to be tailored to the individual specialities in order to provide appropriate stress support mechanisms and communication channels.

Also, the findings may have implications for the kinds of inservice and continuing education needs of nurses working in the various specialities. For example, nurses in intensive care units might be provided with programs which assist them with the difficulties associated with their tasks and also with programs which promote their interrelationships with physicians. The nurses from intensive care units, pediatric and medical units would seem to require opportunities to work through the stress perceived to be associated with patients' poor prognosis, death and dying, and families being upset.

The results imply that auxiliary (chronic care) unit nurses would seem to require considerable support in order for them to maintain adequate patient care given their perceptions of high stress associated with staffing problems and workload.

Finally, this research did not attempt to investigate non work-related stress which could influence perceptions of work stress. Clearly, more work is yet required to find out the extent to which personal characteristics of individual nurses can influence their perception and abilities to cope with different levels and types of stresses.

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COPING WITH THE DIAGNOSIS OF HYPERTENSION: AN ILLUSTRATION OF A CONCEPTUAL MODEL

Barbara J. Milne

Hypertension is a chronic condition with few subjective symptoms or limiting characteristics, but one that requires life-long medication and medical surveillance if cardiovascular sequelae are to be reduced. Advances in the development of efficacious therapy in recent years have greatly simplified the *medical* management of hypertension. However, in terms of the human experience of illness, the demands of adapting to the diagnosis of hypertension are only recently being recognized. Although some effects of the treatment of hypertension on the individual, such as the cost and side effects of medications, are easily understood, other aspects of the disease experience are less apparent and relate to possible adverse psychological and behavioural consequences of the disease label itself. The use of the term labelling in this context refers to the act of telling the patient a diagnosis term for a condition.

This paper, which is based on a much more extensive study (Milne, Logan, & Flanagan, 1983) will review the relevant literature on the adverse effects of labelling individuals as "hypertensive" and offers a model that explains why these effects may occur. The model is based on Lipowski's (1970) conceptualization of coping with a psychological illness, but shows the particular application in hypertension.

LITERATURE REVIEW

A number of studies have demonstrated that labelling individuals as hypertensive, regardless of whether or not they are subsequently treated, can adversely affect their perception of health, psychosocial functioning, and work absenteism.

Perception of Health

In a national survey mounted by the National Heart and Lung Institute (Harris, 1973), hypertensives who were aware of their diagnosis were found to be significantly less likely than the total

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population to see their own health in positive terms. In addition, aware hypertensives were more inclined to say there were not as healthy as others their age (9% for the total public vs. 22% for the hypertensive group). This finding was particularly marked for hypertensives between the ages of 35 and 64 suggesting that the impact of the diagnosis is felt most acutely in the middle years.

These results were supported by a cohort analytic trial involving 230 hypertensive steelworkers at DOFASCO steel mills (Mossey, 1981). Mossey noted a negative change in health perception which was almost entirely limited to those hypertensive individuals who were told they needed to take medication for their blood pressure. Specifically, when asked whether the taking of prescribed medications was congruent with being healthy, over 90% of the patients indicated it was not. These data would suggest that the need for physician-prescribed medications may evoke distinct responses in individuals leading toward a re-definition of themselves as "sick."

There is also evidence that these changes in health perception may be sustained. In a cross-sectional study of 50 newly diagnosed, treated hypertensives and 50 previously diagnosed, treated hypertensives (diagnosed 1-3 years ago), Milne et al. (1983) found that in both groups their health status ratings were significantly lower than those of age and sex-matched normotensive subjects ($p < .001$). However, there was no significant difference in health perception between the newly diagnosed and the previously diagnosed hypertensive groups.

The powerful effect of labelling was further demonstrated in a study of 71 mislabelled individuals who were told they were hypertensive by a physician but were later judged normotensive on the basis of three blood pressure measures (Bloom & Monterossa, 1981). None of these persons was taking hypertensive medications or was under medical care. Compared to the total normotensive sample and to a control group matched for age, sex, ethnicity, education and marital status, the mislabelled group reported lower present health ($p \leq .034$) and a worsening of their health over the past five years ($p = 0.35$). This study illustrates that judgments made by a powerful status definer, such as a physician, can evoke changes in perception of health regardless of the validity of the judgments.

Psychological and Behavioural Functioning

In Monk's (1981) analysis of data from a national health examination survey (a cross-sectional study of 3,854 adults aged 25-74), psychologic well-being, as measured by the General Well-being Questionnaire, was significantly lower among those people being treated for high blood pressure than among normotensives or hypertensives who were unaware of their condition. People told at some time that

they had high blood pressure but were not currently taking medication also tended to have lower feelings of psychologic well-being than the normotensive/unaware hypertensive group, but the differences were not statistically significant for all of the sex-race groups considered.

Monk's findings were confirmed in a cross-sectional study of 5,948 patients who had a multiphasic health check-up at the Kaiser-Permanente Medical Centre (Soghikian, Fallick-Hunkeler, Ury, & Fisher, 1981). These researchers found that hypertensives who were aware of their diagnosis, regardless of whether they were on medication, had significantly ($p < .001$) higher anxiety scores, as measured by the Cornell Medical Index and the Minnesota Multiphasic Personality Inventory than either normotensives or hypertensives who were unaware of their condition. The results of these two studies seemed to indicate that possibly knowledge of the condition alone has a negative effect on feelings of psychologic well-being. However, because these studies are cross-sectional, other confounding variables must be considered. Part of the difference between the groups may have been the result of generally poor physical health of those treated or informed of their hypertension. In addition, medication side-effects could have adversely affected feelings of well-being in Monk's study. It is also possible that people who come to be informed about their high blood pressure have, for some reason, feelings of tension or depression that are more likely to lead to an investigation of their hypertensive status.

These concerns, however, are partially addressed by Mossey (1981) who used a cohort analytic design to measure psychological function and self-esteem before and after patients learned they had hypertension. In this trial of hypertensive steelworkers, a significant deterioration in marital and home satisfaction, as measured by the Locke Wallace Adjustment Scale, was reported among the newly diagnosed hypertensives at 6 months, and to a lesser extent at 12 months after diagnosis. This deterioration was significantly greater than for a group of age-matched normotensive controls and was correlated with important increases in work absenteeism in the hypertensive group after screening. Furthermore, these changes occurred regardless of whether medication was prescribed, treatment was followed, or blood pressure was controlled.

Mossey's findings are further supported by Bloom and Monterossa's (1981) study of mislabelled hypertensives in which these individuals reported significantly more depressive symptoms than either the total normotensive sample or a matched control group ($p = 0.005$).

In another study, which demonstrated that diagnosis labelling and treatment affect other aspects of daily living, Milne and co-workers

(1983) found that hypertensives rated their worry about health significantly higher and their general activity level significantly lower than normotensive subjects ($p<0.001$). Significant reductions in time spent at work and in social and sports activities were also noted in hypertensive subjects. These findings persisted across all age and sex categories and could not be explained by increased disability due to symptoms. These results were substantiated by the finding that a large proportion of hypertensives felt they should restrict strenuous exercise, working late hours, emotional excitement, dietary sodium, smoking, and alcohol consumption. In addition, 17% of the hypertensive subjects stated they had made changes in their work activities because of the diagnosis of hypertension. These results are important in view of the fact that they occurred among actively employed, relatively healthy, medicated hypertensives for whom there were no medical contraindications to participate in activities of daily living.

Work Absenteeism

In a cohort analytic study, Taylor, Haynes, Sackett and Gibson (1981) studied absenteeism patterns among 230 hypertensive steelworkers. They found that illness-related absenteeism was higher among those who knew they had hypertension than in either hypertensives unaware of their condition or a normotensive age-matched control group. Furthermore, upon being informed of their hypertension, absenteeism rose dramatically in previously unaware hypertensives, regardless of whether they were placed in therapy ($p<0.05$). Further supporting data for this phenomenon come from the Harris Poll community survey (1973) in which respondents who were aware of their hypertension admitted missing twice as many days at work as those with normal blood pressure.

In summary, consistent results from several cross-sectional and cohort analytical studies have provided evidence that labelling a person as hypertensive may lead to negative changes in health perception and psychologic well-being which in turn influence marital, social, recreational and occupational role functioning.

A CONCEPTUAL MODEL FOR COPING WITH DISEASE DIAGNOSIS

Why is it that some individuals respond to the diagnosis of hypertension as a life crisis, while others handle it as just another "problem of living"? Understanding the variability of the patient response to disease diagnosis requires that we go beyond the biomedical model of disease. In the biomedical model, demonstration of the specific biological deviation is generally regarded as a specific diagnosis criterion for disease. Yet in terms of the human experience of illness, clinical-laboratory documentation may only indicate disease

potential, not the actuality of the disease at the time. The abnormality may be present, yet the patient may not be ill. Thus the presence of the defect of elevated blood pressure at best defines a necessary but not a sufficient condition for the occurrence of the human experience of the disease, the illness. More accurately, the clinical defect constitutes but one factor among many, the complex interaction of which ultimately may culminate in active disease or manifest illness (Engel, 1977). How the disease diagnosis is experienced by patients and how it affects them requires consideration of psychological, social and cultural factors, not to mention concurrent or complicating biological factors.

Furthermore, "rational treatment" directed only at the biochemical abnormality does not necessarily restore the patient to health even in the face of documented correction or major alleviation of the abnormality. Other factors may combine to sustain sick role behaviour even in the face of biochemical recovery or control. Conspicuously responsible for such discrepancies are psychological and social variables. Thus, some patients under good blood pressure control still experience diminished psychosocial and behavioural functioning.

Some authors have proposed that variation in patient behaviours may be attributed to differences in the ways in which illness is perceived. Lipowski (1970) has conceptualized the complex multifactorial process of interpreting and coping with physical illness. A diagrammatic interpretation of this concept is shown in Figure 1.

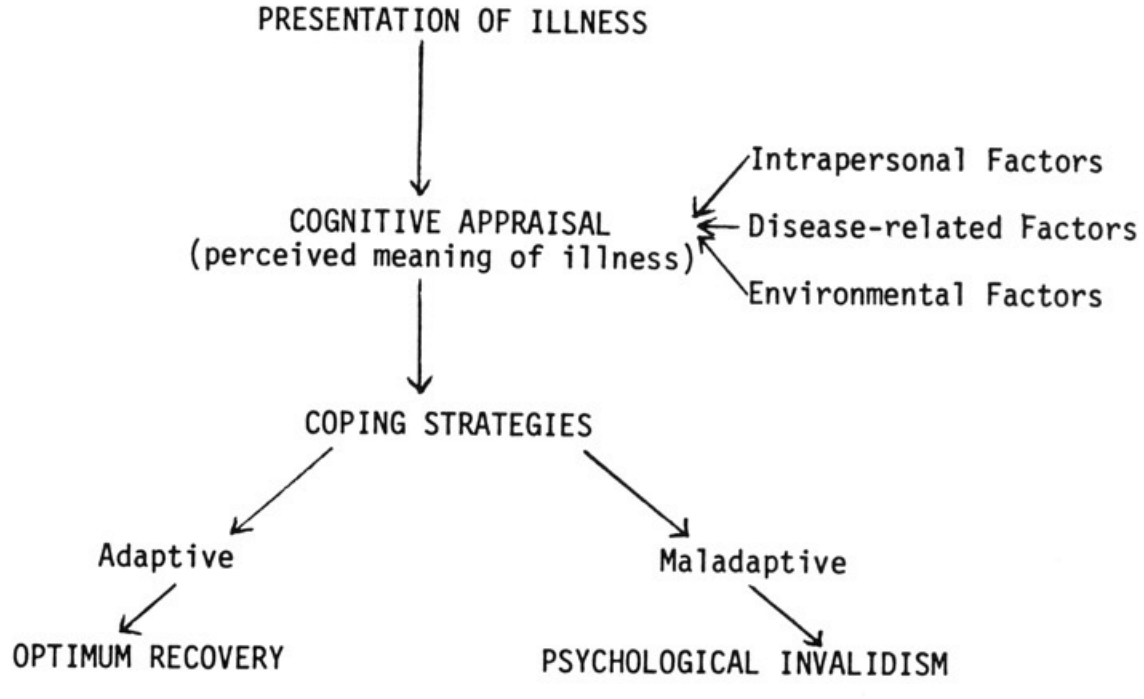

Figure 1. A conceptual model for understanding adaptation to physical illness based on factors identified by Lipowski (1970).

Physical illness, or even the diagnosis of illness, can be conceived of as a form of psychological stress involving threat of suffering and loss; this stress gives rise to a set of adaptational tasks to be mastered. The challenge thus presented precipitates the use of various coping strategies, techniques employed by the sick person to deal with the illness and its consequences. They are an amalgamation of both the individual's habitual coping style and the attempts to try new approaches to the specific challenges posed by the illness.

However, Lipowski maintains that the key concept underlying the coping process is the *meaning* that the individual attaches to the disease. This is a cognitive process which includes evaluations and beliefs that patients evolve regarding their illness and its likely consequences. These interpretations begin with the first perception of a pathological process and continue on a conscious or unconscious level throughout the course of illness. Lipowski (1969) declares that "meaning is the core of the person's psychological response to his disease" (p. 1198).

Lipowski lists a number of factors that contribute to the subjective meaning of an illness and, in turn, help determine the coping strategies. These may be grouped into: 1) Intrapersonal factors such as age, intelligence, cognitive and emotional development, philosophical or religious beliefs, and previous coping experiences; 2) Disease-related factors such as the type and location of symptoms, chronicity, the rate and progression of a disease, occurrence of complications; and 3) Environmental factors such as quality of social support, physical milieu of the home or hospital, ethnic attitudes toward illness.

Coping strategies refer to "intrapsychic activities as well as to communications and actions of the sick person aimed at reduction of distress or suffering caused by the disease" (Lipowski, 1970, p. 97). Lipowski groups coping techniques into patterns of coping strategies which revolve around the particular meaning which the illness holds for the individual. For example, a belief that illness is weakness may provoke feelings of shame and attempts at denial or concealment of the illness. The choice of coping strategies, whether adaptive or maladaptive, has important implications for the course of the outcome of the illness. The use of *active* coping strategies such as seeking expert advice, co-operating with therapeutic regimens, and developing substitute sources of satisfaction usually leads to optimum recovery or adjustment to illness or disability. On the other hand, the use of maladaptive coping strategies such as withdrawal, passive surrender to illness, or excessive dependence on others often leads to psychological invalidism.

In the case of hypertension, the psychological response to the disease is initiated by a doctor's statement (application of the diagnostic label) that a pathological process exists that places the patient at risk for a particular illness (e.g., stroke), even though the patient has no related somatic perception of this process. Through the process of cognitive appraisal, patients will interpret the diagnosis of hypertension in a variety of ways; in some cases, they may see it as a significant threat to life and health. Anticipation of danger, whether realistic or not, is accompanied by anxiety of some degree of intensity. Anxiety in turn tends to set off various cognitive and behavioural responses (coping strategies) aimed at minimization or avoidance of the anticipated danger and thus, elimination of the unpleasant experience of anxiety itself. The strategies used by the individuals to reduce anxiety are numerous and in the studies cited include self-restriction of activities and modification of various life-style habits. Although some of these strategies may be looked upon as healthy adaptative mechanisms for dealing with the diagnosis (i.e., attempting weight loss or ceasing to smoke), others may represent unnecessary restrictions that may hamper the person's enjoyment of a full and active life.

Anecdotal reports of hypertensive study subjects serve to further broaden our understanding of how individuals respond to disease diagnosis (Milne et al., 1983). Study subjects were asked what difference the diagnosis of hypertension had made in their lives. A wide variety of responses were made including worry about finding a marriage partner, recognition of aging, premature retirement, restrictions on social life, sports activities and sexual relationships, and attribution of any illness symptoms to high blood pressure. However, the concern that was mentioned most frequently was the strain on marital and family relationships that had occurred since the diagnosis. A number of reasons for this discord were given including sexual difficulties, nagging about medication or dietary compliance, and the increased self-centredness and body consciousness of the hypertensive individual. These comments correspond with data from Mossey's study (1981) which documented significant deterioration in marital and home satisfaction among newly diagnosed hypertensives.

While the anxiety reaction associated with disease diagnoses may not be totally prevented, it may be amenable to nursing intervention. In counselling the hypertensive patient, the nurse can carefully delineate not only those aspects of the patient's life that will change such as consuming daily medication and reducing dietary sodium, but

also those aspects that need not change. Patients can be specifically advised and encouraged to continue current social and recreational activities and essentially lead normal lives.

In summary, coping with the diagnosis of hypertension, an asymptomatic condition, presents unique challenges to patients. They have no symptoms to legitimate the diagnosis to others (family, friends, employer) or to themselves. Because little feedback in relation to symptoms is experienced, they have difficulty judging improvement or deterioration in their condition. Moreover, some individuals may feel worse than before their condition became known to them. Most importantly, though, hypertension is a condition characterized by risk and uncertainty. To be held at risk of some future intangible event because of a seemingly silent disease and for an indefinite time requires major adjustment.

This article has reviewed the relevant literature on the adverse effects of labelling individuals hypertensive and has offered a conceptual model that explains some of the behaviours commonly seen by nurses in practice.

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RÉSUMÉ

Comment composer avec le diagnostic de de l'hypertension

La constance des résultats provenant de plusieurs études transversales et d'études analytiques de cohortes a démontré que lorsqu'on 'étiquette' quelqu'un comme hypertendu, cela risque d'avoir des effets négatifs sur sa santé et sur son bien-être psychologique, effets qui pourront à leur tour influer sur la vie conjugale, sociale, récréative et professionnelle de cette personne. Le modèle de conceptualisation de Lipowski relatif aux maladies physiologiques permet d'expliquer les changements qui se produisent lorsque l'individu tente de composer avec son diagnostic parce que l'idée principale à la base de ce mécanisme correspond au sens que chaque personne attache à la maladie.

LA RELATION PROFESSEUR-ÉTUDIANT EN STAGE CLINIQUE ET L'INTÉRÊT DE L'ÉTUDIANT

Céline Goulet

Certains facteurs sont susceptibles d'influencer l'intérêt des étudiants infirmiers pour les stages cliniques. Parce qu'il est personne-ressource et modèle, parce qu'il assure le lien entre le milieu et les étudiants et par sa présence continue auprès d'eux, le professeur représente pour nous l'élément central de cette influence.

Plusieurs caractéristiques du professeur entrent en jeu dans ses relations avec les étudiants, mais celles qui nous préoccupent plus particulièrement se regroupent dans les attitudes interpersonnelles. Ce sont l'authenticité, la considération et la compréhension empathique. Cette étude se propose donc de démontrer la relation qui peut exister entre ces aptitudes chez le professeur et l'intérêt manifesté par l'étudiant pour son stage clinique.

CONTEXTE THÉORIQUE

Il fut admis pendant longtemps, comme un truisme, que les comportements du professeur ont un impact sur l'atmosphère de la classe. Ce n'est que depuis les 50 dernières années qu'on tenta de vérifier ce postulat. La recherche d'Anderson et Brewer (1946), portant sur la personnalité des enseignants, démontre clairement que les étudiants se conduisent différemment lorsqu'ils sont supervisés par tel ou tel type d'adultes.

Amatora (1954), Bush (1954), Callis (1953), Cogan (1958), Reed (1953) et Thelen (1951) utilisèrent rigoureusement différents échantillons, mesures, variables et firent la preuve sans équivoque que l'atmosphère de la classe est en partie dépendante des comportements et des attitudes du professeur, ce qui affecte significativement les étudiants dans leur apprentissage. Cette recherche met en évidence les attitudes d'authenticité (A), de considération (C) et de compréhension empathique (E) de l'enseignant et l'intérêt de l'étudiant pour son apprentissage.

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Qualités relationnelles

Rogers (1972) considère l'authenticité (A) de l'enseignant comme la qualité essentielle et fondamentale qui facilite l'apprentissage de l'étudiant. Un enseignant authentique entre en relation avec l'apprenant, sans présenter de masque et de façade. Les sentiments et les émotions qui l'habitent peuvent jaillir à la surface de sa conscience; il peut les vivre et les partager s'il en ressent le besoin. Sa rencontre avec l'étudiant se fera sur la base d'une relation directe, de personne à personne. Le professeur vit pleinement ses sentiments et les accepte comme siens et ne joue pas le "rôle de professeur," c'est-à-dire l'incarnation impersonnelle des exigences d'un programme.

Toujours selon Rogers (1972), l'apprentissage authentique se produit dans la mesure où l'enseignant accepte l'étudiant tel qu'il est. Cette seconde attitude, appelée considération (C) ou acceptation, consiste à éprouver de la considération pour l'apprenant, tant pour sa personne que pour ses sentiments et ses opinions, sans toutefois devenir possessif. C'est aussi l'acceptation de l'étudiant comme une personne indépendante avec des droits spécifiques. C'est le respect des sentiments personnels et des besoins de l'étudiant. La considération est l'expression par le professeur de sa confiance dans les capacités de l'apprenant.

La dernière caractéristique énumérée par Rogers (1972), la compréhension empathique (E), consiste, en quelque sorte, à se mettre à la place de l'apprenant, à voir les choses avec son cadre de références et à lui communiquer cette compréhension. Elle permet de comprendre ce que vit l'étudiant, ce qu'il ressent et surtout ce qu'il est, sans porter de jugement et sans faire d'analyse. Elle permet de lui exprimer ce qu'il vit ou veut vivre, qu'il est capable d'apprendre, qu'il mérite considération, qu'il est une personne valable.

Notions d'apprentissage

Il existe différentes conceptions de la notion d'apprentissage; elles varient en fonction de ce qui est défini comme but ou comme processus de l'apprentissage (Ausubel, 1968; Gagné, 1976; Rogers, 1972; Saint-Arnaud, 1974). On dégage de ces conceptions que l'apprentissage significatif est un processus complexe englobant plusieurs dimensions. C'est une expérience individuelle, dynamique, qui se déroule à l'intérieur de l'individu. Elle émane d'un désir, d'une volonté d'acquérir des connaissances ou de poser des actes en vue de satisfaire des besoins, elle provient plus précisément de l'intérêt de la personne. Cette expérience d'apprentissage survient généralement lorsque l'apprenant entre en interaction avec son environnement. L'apprentissage constitue la raison d'être de la relation professeur-étudiant en fonction

duquel ils unissent leurs efforts. Pour Rogers (1972) et Saint-Arnaud (1974), l'apprentissage significatif dépend avant tout des conditions facilitantes offertes par le professeur dont certaines sont des qualités de la relation interpersonnelle.

Le produit de l'apprentissage est le reflet de ce qui a été appris. Le rendement scolaire, la modification persistante d'un comportement, la tendance à l'actualisation de l'individu incluant la satisfaction du besoin fondamental de comprendre sont tous des produits ou des réponses de l'apprentissage.

Qualités relationnelles et apprentissage

Rogers (1972) et Saint-Arnaud (1974) principalement, soutiennent que l'apprentissage significatif prend place lorsque certaines caractéristiques ou qualités de relation interpersonnelle professeur-étudiant sont présentes. Leurs théories démontrent que les trois qualités relationnelles (A-C-E) favorisent toutes les phases de l'apprentissage y compris l'intérêt d'apprendre, élément essentiel à tout apprentissage significatif.

Lorsque l'étudiant possède en lui l'intérêt, le rôle de l'enseignant consiste à activer cet intérêt et parfois à le diriger ou le canaliser dans une autre direction. Dans le cas contraire, lorsque l'apprenant manque d'intérêt face à une situation d'apprentissage, le professeur doit faire en sorte de susciter sa curiosité et provoquer chez lui, l'anticipation de la réussite qu'il obtiendra par son activité d'apprentissage. Dans l'un ou l'autre des cas, les attitudes relationnelles supportent, activent l'intérêt de l'étudiant et ainsi, facilitent l'apprentissage.

Recherches dans ce domaine

On a relevé plusieurs (35) recherches expérimentales que l'on a regroupées suivant trois dimensions de l'apprentissage, c'est-à-dire: le rendement scolaire (26 études), le fonctionnement cognitif (4 études) et le développement de la personnalité (5 études).

Certaines études ont fait ressortir avec clarté l'influence qu'ont les attitudes d'authenticité, de considération et d'empathie du professeur sur le rendement scolaire (Aspy, 1965; Conners & Eisenberg, 1966; Davidson & Lang, 1960; Fortune, 1967; Kratochvil, 1968; St-John, 1971; Turner & Denny, 1969) et sur le fonctionnement cognitif de l'étudiant (Aspy & Roebuck, 1972-1974; McCardle, 1959; Rothman, 1969).

D'autres chercheurs se sont penchés sur les relations entre les composantes de l'affect du professeur et celles de la personnalité de l'étudiant. On se réfère à la thèse de Reed (1961) qui étudia l'attitude de considération et sa relation avec l'intérêt pour les sciences; à celle de

Parkinson (1977) qui s'attarda à l'attitude d'authenticité chez le professeur et à la "découverte de soi" chez l'étudiante-infirmière; et à celle de Rosendahl (1973) qui confirma partiellement ses hypothèses voulant qu'il y ait une relation entre les qualités d'authenticité, de compréhension empathique et de considération du professeur telles que perçues par l'étudiante-infirmière et certains aspects de "l'actualisation de soi" chez cette étudiante.

On remarque que les recherches effectuées à partir des attitudes ne comprennent pas toujours les trois caractéristiques fondamentales (A-C-E) à une relation interpersonnelle. Pourtant, Rogers (1958-1972) de même que Truax et Carkhuff (1967) les considèrent indissociables et essentielles pour faciliter l'apprentissage. L'étude de Rosendahl (1973) souligne et soutient cette association.

Dans les études précitées, les attitudes relationnelles furent mesurées selon trois modalités différentes: l'évaluation faite par l'étudiant, l'évaluation faite par le professeur et l'observation de l'enseignant en classe. Certaines études ont combiné deux de ces modes. Selon Rogers (1958), la perception qu'a l'étudiant des attitudes relationnelles est de toute première importance dans son apprentissage puisqu'il est une démarche personnelle qui se passe à l'intérieur de l'individu.

Reed (1961) s'est penché sur la question à savoir si les perceptions des étudiants rapportaient fidèlement les comportements démontrés par les professeurs. L'analyse des résultats indique que les perceptions des étudiants reflètent bien ce qu'est réellement le professeur.

La présente recherche a tenu compte de la position de Rogers sur la nécessité de retrouver les trois qualités relationnelles (A-C-E) pour faciliter un apprentissage et sur l'importance que représente la perception étudiante dans l'évaluation de ces qualités. L'*hypothèse suivante* fut formulée:

Chez les étudiants en sciences infirmières, il existe une corrélation positive entre les qualités relationnelles (Authenticité, Considération, Compréhension empathique) du professeur, telles que perçues par l'étudiant-infirmier, et l'intérêt que celui-ci porte à son stage clinique.

MÉTHODOLOGIE

Sujets

L'échantillon final comprenait 71 étudiants (69 filles et 2 garçons) infirmiers de deuxième année inscrits au baccalauréat de base en sciences infirmières. Tous les sujets avaient réussi leur stage clinique de première année. L'âge variait entre 20 et 31 ans.

Au début de l'année, les étudiants avaient été répartis au hasard en trois groupes selon les spécialités enseignées, c'est-à-dire: l'obstétrique, la pédiatrie et la psychiatrie. Pour la supervision de l'enseignement en champ clinique, chaque groupe était subdivisé en quatre sous-groupes ayant une capacité individuelle maximale de huit étudiants. Un professeur était responsable de chaque sous-groupe. Nous avions donc 12 sous-groupes et 12 professeurs de sexe féminin chargés de l'enseignement clinique. Au moment de l'expérimentation, à la fin d'avril, la répartition des sujets participant à l'expérience était la suivante: 22 étudiants dans le secteur obstétrique, 26 étudiants dans le secteur de pédiatrie et 23 étudiants dans le secteur de la psychiatrie (la durée moyenne des stages était de 21 jours soit 7 semaines à raison de 3 jours/semaine). Tous avaient reçu à l'intérieur de leur stage de psychiatrie, les notions "rogériennes" sur les qualités de relation interpersonnelle.

Méthode

L'expérimentation s'est déroulée dans une université de Montréal. Tous les sujets ont rempli deux questionnaires.

Le *différentiateur sémantique* de Geis (1968) fut choisi pour mesurer la variable "intérêt" pour le stage clinique. La méthode du différentiateur sémantique fut inventée par Osgood, Suci et Tannenbaum (1957) afin de mesurer la signification psychologique des choses, des concepts. Le fondement de cette méthode se base sur le rapport que fait l'étudiant entre certaines images verbales ou représentations affectives et divers concepts. La validité fut prouvée par une analyse d'items. Les coefficients de corrélation sont tous significatifs à $p \leqslant .01$. Pour ce qui est de la fidélité de l'instrument, l'indice mesuré au moyen du coefficient α de Cronbach (1951) est de .8254.

L'*inventaire de relation* de G. T. Barrett-Lennard (1964) renferme 64 items appartenant à quatre échelles différentes correspondant aux qualités relationnelles. Le test s'adresse aux étudiants et mesure les qualités relationnelles du professeur telles que perçues par l'étudiant. Le coefficient α de Cronbach obtenu pour la mesure de fidélité est de .8320. En ce qui concerne la validité, on constate que toutes les échelles sont en forte corrélation entre elles et avec l'ensemble du test ($p \leqslant .01$).

La passation des questionnaires s'est effectuée de façon collective. L'avant-dernière semaine de stage fut retenue pour l'expérimentation afin d'éviter les influences qu'auraient pu créer les activités de la dernière semaine académique, soit l'évaluation clinique par le professeur et l'examen de fin de session.

Présentation des résultats

L'étude de l'hypothèse s'est faite d'abord en fonction de la perception de l'ensemble des qualités et par la suite, en fonction de la perception de chacune des trois qualités. Compte tenu que les étudiants étaient divisés en trois sous-groupes au moment de l'expérimentation (pédiatrie, obstétrique, psychiatrie), il apparaissait important de présenter les résultats obtenus pour chaque sous-groupe en plus de présenter les résultats de l'échantillon total.

Pour la vérification de notre hypothèse, on a procédé au calcul du r de Pearson entre les résultats aux échelles de qualités de l'*inventaire de relation* et les résultats à la famille d'items "intéressant" du *différentiateur sémantique* pour l'ensemble des sujets. De plus, on a utilisé la formule de corrélation partielle de second ordre pour calculer les coefficients de corrélation partielle puisqu'il existe une forte dépendance entre les échelles de qualités de l'*inventaire de relation.* L'application de cette formule nous renseigne sur les corrélations existant entre l'intérêt et chaque qualité prise isolément. Pour l'étude des sous-groupes de l'échantillon (pédiatrie-obstétrique-psychiatrie) on s'est servi des tests statistiques mentionnés précédemment. La formule du t de *student* fut retenue quant à la différence entre les moyennes des sous-groupes au tèst *différentiateur sémantique* et entre les moyennes des sous-groupes au questionnaire l'*inventaire de relation.*

Les tableaux 1, 2, 3 et 4 présentent les corrélations calculées entre les résultats obtenus pour la famille d'items "intéressant" du *différentiateur sémantique* et les résultats des échelles de qualités relationnelles de l'*inventaire de relation.* Ils indiquent également les coefficients de corrélation partielle entre les résultats à chaque échelle de qualité et ceux de la famille d'items "intéressant". Ils précisent la signification statistique des coefficients de corrélation.

Au tableau 1, on constate que le coefficient calculé entre l'intérêt et l'ensemble des qualités est très significatif ($p \leqslant .01$). Les coefficients obtenus aux deux premières échelles de qualités relationnelles sont fortement significatifs ($p \leqslant .01$) et celui calculé pour la troisième qualité est significatif à un seuil légèrement plus faible ($p \leqslant .05$). Par contre, on note que les coefficients de corrélation partielle obtenus pour chaque qualité mesurée isolément avec l'intérêt ne sont pas significatifs. La corrélation calculée en rapport avec l'ensemble des qualités permet de supporter l'hypothèse.

Au tableau 2, on note que pour chaque qualité, les coefficients de corrélation sont significatifs tandis que les coefficients de corrélation partielle ne sont pas significatifs. La valeur obtenue pour l'ensemble

des qualités est fortement significative. En ce qui concerne l'ensemble des qualités, ces résultats permettent de confirmer l'hypothèse pour le sous-groupe de pédiatrie.

Tableau 1

Corrélation entre les perceptions des sujets concernant les qualités relationnelles offertes par le professeur et l'intérêt des sujets pour leur stage clinique

Famille d'items	Échelles	Coefficient de corrélation r	Coefficient de corrélation partielle
Intéressant	Authenticité	.3914*	.2075
	Considération	.3617*	.1382
	Compréhension empathique	.2466**	−.0953
	Ensemble des qualités	.3623*	—

n=71

* corrélation significative à p≤.01
** corrélation significative à p≤.05

Tableau 2

Corrélations entre les perceptions des sujets du sous-groupe de pédiatrie concernant les qualités relationnelles offertes par le professeur et l'intérêt de ces sujets pour leur stage clinique

Famille d'items	Échelles	Coefficient de corrélation	Coefficient de corrélation partielle
Intéressant	Authenticité	.5583*	.2842
	Considération	.5032*	.0750
	Compréhension empathique	.4735**	.1125
	Ensemble des qualités	.5939*	

n=26

* corrélation significative à p≤.01
** corrélation significative à p≤.05

Tableau 3

Corrélations entre les perceptions des sujets du sous-groupe d'obstétrique concernant les qualités relationnelles offertes par le professeur et l'intérêt de ces sujets pour leur stage clinique

Famille d'items	Échelles	Coefficient de corrélation	Coefficient de corrélation partielle
Intéressant	Authenticité	.2146	.1954
	Considération	.1104	−.0955
	Compréhension empathique	.1222	.0113
	Ensemble des qualités	.1299	

n = 22

Le tableau 3 montre qu'aucun des coefficients n'est significatif à $p \leqslant .05$. L'hypothèse est donc infirmée en ce qui regarde les sujets du sous-groupe d'obstétrique.

Un seul coefficient est significatif au tableau 4. La relation se situe entre l'intérêt et la considération. Nous confirmons partiellement notre hypothèse auprès des étudiants du sous-groupe de psychiatrie.

Tableau 4

Corrélations entre les perceptions des sujets du sous-groupe de psychiatrie concernant les qualités relationnelles offertes par le professeur et l'intérêt de ces sujets pour leur stage clinique

Famille d'items	Échelles	Coefficient de corrélation	Coefficient de corrélation partielle
Intéressant	Authenticité	.3465	.0549
	Considération	.4888**	.5197**
	Compréhension empathique	.1353	−.5166
	Ensemble des qualités	.3411	

n = 23

** corrélation significative à $p \leqslant .05$

Afin de savoir si les variables "intérêt" et "perceptions des qualités relationnelles" variaient d'un sous-groupe à l'autre, des comparaisons furent établies. Le tableau 5 présente les comparaisons des moyennes obtenues à l'intérêt, tandis qu'au tableau 6, on retrouve les comparaisons des moyennes concernant les perceptions des qualités relationnelles entre les sujets des sous-groupes.

Tableau 5

Moyenne, écart-type et rapport t concernant les résultats obtenus à l'intérêt par les sujets des sous-groupes

Sous-groupe	Nombre de sujets	Moyenne	Écart-type	Rapport t
Pédiatrie	26	198.7307	22.4294	1.6436
Obstétrique	22	209.8636	24.4720	
Pédiatrie	26	198.7307	22.4294	.2246
Psychiatrie	23	197.2608	23.3572	
Obstétrique	22	209.8636	24.4720	1.7679*
Psychiatrie	23	196.2608	23.3572	

* $p \leq .05$

A l'examen du tableau 5, on constate qu'il n'y a pas de différence significative au seuil de probabilité de .05 entre les sous-groupes de pédiatrie et d'obstétrique et les sous-groupes de pédiatrie et de psychiatrie. Les sujets des sous-groupes sont donc équivalents quant à l'intérêt qu'ils portent à leur stage respectif. Cependant, on remarque que la moyenne de l'intérêt des sujets du sous-groupe d'obstétrique est significativement supérieure ($p \leq .05$) à celle relevée pour les sujets du sous-groupe de psychiatrie.

Le tableau 6 indique qu'il n'y a pas de différence significative entre les sous-groupes de pédiatrie et d'obstétrique. Par contre, on note que les moyennes des perceptions des sujets des sous-groupes de pédiatrie et d'obstétrique sont significativement supérieures ($p \leq .05$) à celle obtenue par les sujets du sous-groupe de psychiatrie.

Tableau 6

Moyenne, écart-type et rapport t concernant les perceptions des qualités relationnelles par les sujets des sous-groupes

Sous-groupe	Nombre de sujets	Moyenne	Écart-type	Rapport t
Pédiatrie	26	76.6153	42.9194	.6074
Obstétrique	22	71.0454	44.3100	
Pédiatrie	26	76.6153	42.9194	2.6821*
Psychiatrie	23	42.1304	47.1025	
Obstétrique	22	71.0454	44.3100	2.1192*
Psychiatrie	23	42.1304	47.1025	

*$p \leq .05$

Analyse et discussion des résultats

Le tableau 6 indique la présence d'une relation significative entre l'intérêt des étudiants pour leur stage clinique et la perception par ces étudiants de l'ensemble des qualités relationnelles de leur professeur de stage clinique. Ces résultats permettent de confirmer notre hypothèse. On constate que la corrélation positive entre l'intérêt et l'ensemble des qualités est fortement significative ($p \leq .01$).

Si on dissèque la variable indépendante, on retrouve au niveau de la qualité d'authenticité une relation significative aussi forte que pour l'ensemble des qualités. Lorsqu'on supprime l'influence des autres qualités sur l'authenticité, cette relation disparaît. Il en est de même pour les qualités relationnelles de considération et de compréhension empathique. Les coefficients de corrélation partielle sont très importants puisque ce sont eux qui nous renseignent sur la véritable valeur de la relation entre la perception de chaque qualité relationnelle et l'intérêt pour le stage clinique. Les autres coefficients de corrélation calculés ne nous donnent pas uniquement la valeur de la relation entre chaque qualité et l'intérêt puisque la mesure d'une qualité est en étroite relation avec la mesure des autres qualités. La dépendance calculée entre les échelles est très forte ($p \leq .01$).

Les résultats en rapport avec chaque qualité et l'intérêt nient la présence d'une relation significative entre ces variables. Par contre, les résultats rapportés au sujet de l'ensemble des qualités permettent de confirmer notre hypothèse. Ces constatations sont cohérentes avec les positions théoriques de Rogers (1972) et de Saint-Arnaud (1974).

Les tableaux 2, 3 et 4 nous fournissent les coefficients de corrélation et les coefficients de corrélation partielle entre la perception des sujets des trois sous-groupes concernant les qualités relationnelles offertes par le professeur et leur intérêt pour le stage clinique. On note une grande différence entre les résultats et il apparaît difficile d'interpréter ces différences entre les groupes.

Les résultats du sous-groupe de pédiatrie sont ceux qui se rapprochent le plus des résultats obtenus pour l'ensemble des sujets lorsqu'on s'attarde aux coefficients de corrélation. L'authenticité, la considération et l'ensemble des qualités sont significatifs à $p \leqq .01$. La compréhension empathique est significative à $p \leqq .05$. Aucun des résultats obtenus par les sujets du sous-groupe d'obstétrique n'est significatif, tandis que pour les sujets du sous-groupe de psychiatrie, la variable considération est significative à $p \leqq .05$.

Si l'on analyse les coefficients de corrélation partielle, on constate que tous les coefficients de chaque sous-groupe ne sont pas significatifs exception faite de la variable considération pour les sujets du sous-groupe de psychiatrie. Ce résultat est plutôt surprenant puisqu'il est assez rare qu'un coefficient de corrélation partielle soit plus élevé que le coefficient de corrélation déjà calculé pour cette variable.

L'analyse des résultats révèle donc la présence d'une relation significative entre la perception par les sujets du sous-groupe de pédiatrie de l'ensemble des qualités relationnelles offertes par le professeur et leur intérêt pour le stage clinique. Par contre, aucune relation n'est évidente pour les deux autres sous-groupes. Il est possible que des changements plus fréquents de professeurs soient à l'origine de l'absence de corrélation entre l'intérêt de l'étudiant et la perception de l'ensemble des qualités relationnelles du professeur au sein du sous-groupe d'obstétrique. Les étudiants de cette spécialité changent de professeur à deux reprises ce qui diminue la durée de la relation professeur-étudiant. Cette contrainte nuit à l'intensité du contact psychologique étudiant-professeur et ne favorise pas l'établissement d'un climat de confiance. L'absence prolongée d'un professeur régulier, remplacé par plusieurs substituts est une autre raison qui pourrait justifier les résultats du sous-groupe de psychiatrie. Ceci ne fournit qu'une explication incomplète et hypothétique des résultats.

Une autre explication des variations observées entre les trois sous-groupes pourraît être l'influence de la matière enseignée sur l'intérêt de l'étudiant. Si on examine au tableau 5 les moyennes obtenues par les sujets de chaque sous-groupe pour l'intérêt, nous observons qu'il n'y a pas de différence significative entre les sous-groupes d'obstétrique et de pédiatrie et les sous-groupes de psychiatrie et pédiatrie. La

moyenne du sous-groupe d'obstétrique est significativement supérieure à celle du sous-groupe de psychiatrie au seuil de probabilité de .025. Puisque l'écart est très faible, nous pouvons dire que les groupes sont semblables quant à la moyenne d'intérêt pour le stage clinique. Nous sommes donc dans l'obligation de rejeter cette explication.

D'autre part, la matière enseignée peut avoir un impact sur la perception par les étudiants de leur environnement éducatif. Comme le mentionnent Grobman (1968) et Welch (1969) cet aspect de la question est souvent négligé par les chercheurs. Le tableau 6 livre les comparaisons établies entre les moyennes obtenues par les sujets de chaque sous-groupe pour la perception des qualités relationnelles du professeur. Il existe des différences significatives entre les moyennes des sous-groupes de psychiatrie et de pédiatrie et entre celles des sous-groupes de psychiatrie et obstétrique mais il n'y en a aucune entre les moyennes des sous-groupes d'obstétrique et de pédiatrie. Nous notons que la différence se situe au niveau du sous-groupe de psychiatrie. On peut se demander si la variété des expériences des étudiants lors de leur stage clinique serait la cause de cette différence. De plus, la diversité des champs cliniques confronte les étudiants avec des problèmes de nature différente et souvent angoissante comme c'est le cas pour le stage de psychiatrie. Lors de son stage de psychiatrie, l'étudiant fait face plus fréquemment à des situations conflictuelles que lors des autres stages. Face à ces situations et selon l'attitude que le professeur adopte à son égard, l'étudiant peut ériger des défenses qui biaisent ses perceptions.

Implications

Cette étude descriptive ne permet pas de tirer des conclusions définitives, mais les résultats démontrent qu'en général chez les étudiants-infirmiers universitaires, l'intérêt pour leur stage clinique est relié à la perception de certaines qualités relationnelles offertes par leur professeur de stage clinique.

On croit que le choix des professeurs cliniques devrait tenir compte non seulement des connaissances théoriques et pratiques en nursing, mais aussi des attitudes interpersonnelles. Il serait pertinent de vérifier si un changement d'intérêt chez l'étudiant, entre le début et la fin d'un stage clinique, serait relié à la perception de qualités interpersonnelles chez le professeur clinique. Nous sommes conscients que la période d'expérimentation serait de courte durée mais par contre, les contacts entre le professeur et l'étudiant seraient nombreux puisque le professeur demeure avec les étudiants toute la journée.

Il serait également intéressant de reprendre l'étude auprès d'un échantillon de sujets comprenant un nombre suffisant d'étudiants des deux sexes, ce qui permettrait de dégager les différences de perception entre les filles et les garçons. Le sexe des profeseurs pourrait aussi faire l'objet d'un contrôle puisqu'une étude (Reed, 1961) a déjà démontré que la perception des qualités interpersonnelles divergent selon le sexe du professeur.

Les résulats présentés dans cette recherche furent recueillis auprès des étudiants de deuxième année. On pourrait étudier l'influence des qualités de la relation interpersonnelle sur l'intérêt des étudiants mais à plusieurs niveaux académiques. On pourrait établir des comparaisons entre les étudiants de première, deuxième et troisième année du programme de baccalauréat en sciences infirmières. Une autre piste possible serait de comparer des échantillons provenant de deux universités différentes ou même, un échantillon provenant d'un programme de baccalauréat en sciences infirmières et un autre provenant d'un programme de techniques infirmières offert dans un collège.

Il reste encore plusieurs aspects à exploiter dans les relations interpersonnelles en situation d'enseignement. C'est par l'entremise de recherches pertinentes qu'on pourra préciser davantage les conditions d'application de la théorie du développement de la personne en situation d'apprentissage.

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ABSTRACT

Professor-student relationship during the clinical experience and the student's level of interest

Many factors influence the level of interest of student nurses in their clinical experience and very few studies have been done on student perceptions of their clinical professors' interpersonal attitudes. This study proposes to demonstrate the connection between a professor's genuineness, consideration, empathy and compassion as perceived by the student, and the degree of the student's interest in the clinical experience. Data were compiled in a university nursing school from 71 second year students. The Geis semantic differentiator and the G. T. Barrett-Lennard relationship inventory were used as measurements. Analysis of the data revealed a highly significant link between the students' level of interest in their clinical experience and their perception of their professors' overall ability to relate to them. On the other hand, results relating each individual quality (setting aside the influence of the others) to interest level suggest that there is no significant connection between these variables. These observations are consistent with the author's theoretical stance. They lead us to believe that the choice of professors for clinical teaching should take into account not only their theoretical and practical nursing knowledge, but also their ability to relate to students. Also, it would be relevant to ascertain whether any change in a student's level of interest from the beginning to the end of the clinical experience is connected with that student's perception of the clinical professor's interpersonal qualities.

ACCIDENTAL POISONINGS IN PRESCHOOLERS IN BRITISH COLUMBIA

Margaret Rhone • Eunice Anderson • Janet Robinson Stuart

PROBLEM

Accidental poisonings continue to be prevalent among children 6 months to 4 years in British Columbia, despite child-proof containers, prenatal classes, and information available to consumers from poison control centres and other sources.

Of a total of 191,205 children between the ages of 0 and 4 years, 3,888 were accidentally poisoned in 1981, an increase over each of the previous 6 years (Province of British Columbia, 1975-1981). Primary preventive measures in operation at present may be inadequate. Implementation of a plan of prevention is of utmost importance for the reduction of the incidence of accidental poisonings in the 0-4 year old category.

THE COMMUNITY

British Columbia is both the target and the vehicle for change. As the target, it is the arena in which the community health nurse (CHN) gathers evidence of environmental or social factors which may be viewed as undesirable, that is, statistics regarding accidental poisonings, composition of population and its characteristics, and the space and time in which accidental poisonings occur.

As a vehicle for change, British Columbia contains some of the elements needed to counteract the defined problem. The CHN may identify and utilize these elements and propose other community-based preventive measures.

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In their operational definition of a community, Shamansky and Pesznecker (1981) envisioned it as the "what" and then considered the dimensions of (a) "where and when," (b) "why and how," and (c) "who." We have found their model useful in our analysis of accidental poisonings in British Columbia (Figure 1).

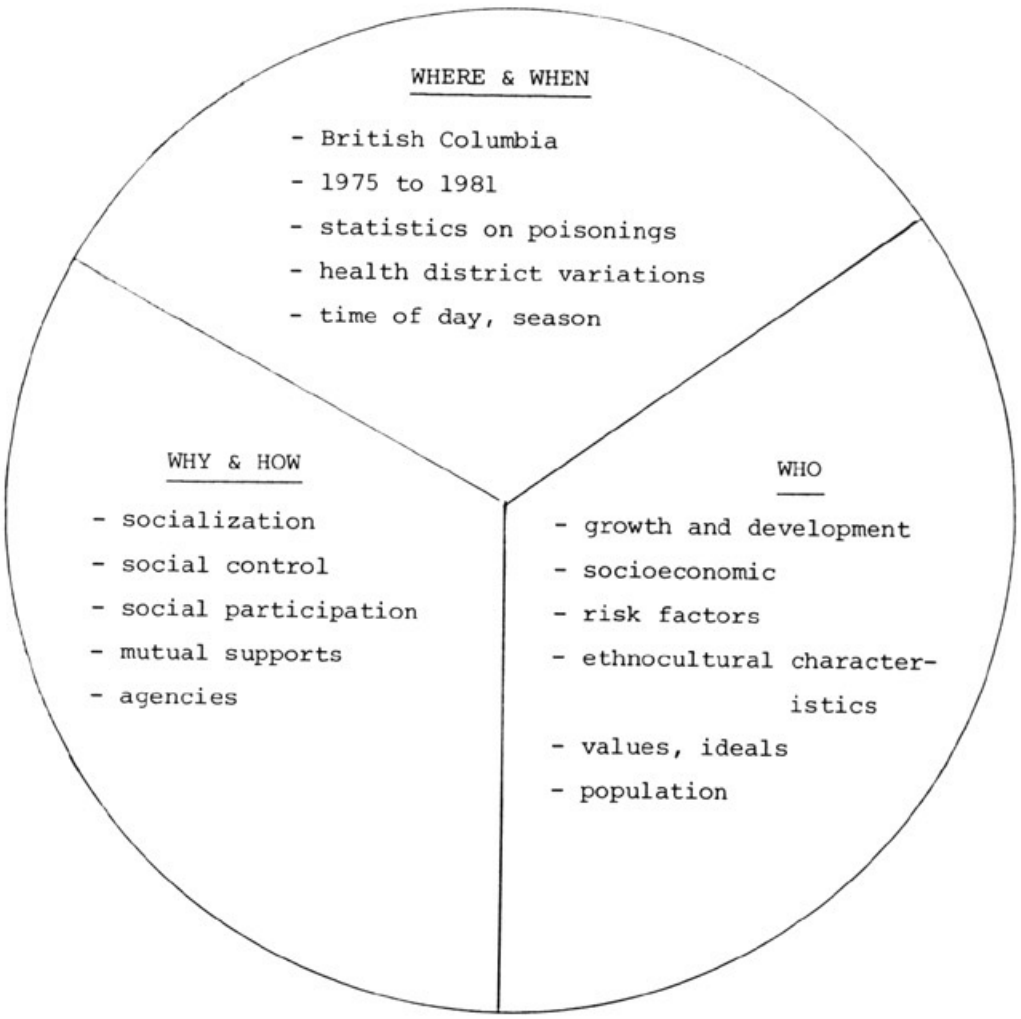

Figure 1. Operational definition of community.

Where and When

The population of British Columbia in mid-1981 was estimated at 2,637,000, an increase of 107,500 over 1980. In 1980, poisoned 0-4 year olds represented 1.57% of that age group and 44% of all poisonings. By 1981, the incidence had risen to 2.03% of the age group, and 46% of all poisonings (Table 1).

Table 1

Comparison of Poisonings in All Ages
in British Columbia, 1975-81
(in percentages)

	Age Group							
Year	0-4	5-9	10-14	15-24	25-29	30-49	50+	NS
1981	46	2.9	3	24		12.3	11.8	
1980	44	3	3	18	7	15	11	
1979	39	3	3	20	8	15	11	
1978	34	2	3	21	9	18	12	
1977	32	2	3	23	1	19	10	
1976	34	2	3	23	10	19	6	5
1975	36	3	3	23	9	18	5	4

Source. Province of British Columbia, Ministry of Health, Reported poisonings by health district, 1975 to 1981.

From Table 1 we infer that children 0-4 years old account for the highest number of poisonings and that the incidence has been increasing since 1977. When one separates the number of accidental poisonings from intentional in all age groups, one can deduce that the age group of 0-4 year olds accounts for approximately 86% of all incidental poisonings.

An examination of the provincial health unit districts provides interesting insight into variances in the percentages of 0-4 year old poisonings among areas. Table 2 suggests that in 1981, 10 of the 22 districts had greater than 50% of their poisonings in the 0-4 year old group. Although variations in the incidence exist, the problem is province-wide.

A study of 111 cases of accidental poisonings of children in the United States (White, Driggers, & Wardinsky, 1980) could not demonstrate any predominance of the time of day, day of week, or month of year. However, an earlier study illustrated a waking-hour pattern with few

Table 2

Reported Poisonings by Health Unit District in B.C., 1980 and 1981. A Comparison of 0-4 Year Olds as a Percentage of the Total Poisonings in Each District

Health Unit District	1980	1981
East Kootenay	41%	55%*
Selkirk	49	54*
West Kootenay	38	36
North Okanagan	51*	51*
South Okanagan	43	33
South Central	58*	55*
Upper Fraser	46	42
Central Fraser	55*	59*
Boundary	46	41
Simon Fraser	42	35
Coast Garibaldi	55*	61*
Central Vancouver Island	40	37
Upper Island	52*	50
Cariboo	57*	57*
Skeena	43	52*
Peace River	41	43
Northern Interior	44	42
Greater Victoria	34	35
Greater Vancouver	41	52*
North Shore/Lions Gate	42	60*
Richmond General	26	15
Unit not stated	52	47
BRITISH COLUMBIA	44%	46%

Note. * indicates districts which report greater than 50% of their total poisonings are in the 0-4 year old group.

Source. Province of British Columbia, Ministry of Health, 1980, 1981.

ingestions occurring between 11 p.m. and 6 a.m. (Krain, Bucher, & Heidbreder, 1971). They found that food-substitute poisonings peaked around mealtime. In British Columbia, the "Hospital report of a poisoning or drug abuse" has space for "Time of call" and "Time since ingestion," but these data are not tabulated.

Why and How

Preventive measures apply a force to the wellness end of the health/illness continuum, but factors can be identified within the community, which apply a negative force resulting in the high incidence of accidental poisonings in the 0-4 year old group. For example, the cleanliness ethic is seen as a social good but it has a potential hazard. Most homes in British Columbia have highly toxic substances on hand which may be within easy reach of a curious child. Toxic substances include cleaning and polishing agents, shampoos, pesticides, turpentine, and deodorants.

Furthermore, the population can be called "health conscious." Dietary supplements including vitamins and iron account for a large proportion of accidental poisonings of children.

Since the fashion in home decorating with indoor plants had become popular, the incidence of small children ingesting leaves and flowers has increased. Poisonous substances ingested as food had the highest ratio of all poisonous substances in 1981 (Table 3).

Table 3

Trends in the Ratios by Year of Reported Poisonings by the Five Most Commonly Ingested Classes of Substances in 0-4 Year Olds in British Columbia, 1975-81

Class of Substance	1981	1980	1979	1978	1977	1975
Substances ingested as food*	.16	.19	.13	.12	.10	.09
Cleaning & polishing agents	.12	.12	.10	.11	.10	.11
Non-narcotic analgesics & anti-pyretics	.10	.10	.12	.13	.14	.13
Respiratory drugs	.10	.10	.12	.12	.07	.09
Dietary supplements	.08	.08	.08	.07	.07	.09

* Also includes non-edible plants, ethyl alcohol, food poisonings, mushrooms, toadstools, etc.

Note. 1976 data not available.

Source. Province of British Columbia, Ministry of Health, Reported poisonings by health district, 1975-1981.

By referring to Table 3, one can infer that noxious substances ingested as food have, except for 1981, increased each year since 1975. The trend of poisoning with non-edible plants increased each year from 1975 to 1981 from 68% to 82% of the total number of noxious substances ingested as food.

Agencies available. There are numerous agencies in British Columbia which are, at present, being used to counteract the problem of accidental childhood poisonings, at all three levels of prevention.

Primary prevention, as applied to a generally healthy population, has the purpose of decreasing vulnerability to a disease (Shamansky & Clausen, 1980), i.e. accidental poisoning of children.

Examples of teaching resources that may be available to new parents, which include poisoning prevention in the curriculum, are: (a) public health units — prenatal classes, well baby clinics, postnatal home visits; (b) new parents' discussion groups; and (c) Ministry of Health publications. Other examples of primary prevention include child-proof safety-caps, and container labelling of poisonous substances.

Secondary prevention begins at the moment a poisonous substance is ingested by the child. It emphasizes early diagnosis and prompt intervention to halt the pathological process (Shamansky & Clausen, 1980). Examples of resources and agents of secondary prevention include: (a) poison control centres; (b) emergency departments; and (c) administration of syrup of ipecac.

Tertiary prevention comes into play when a resulting disability is stabilized or irreversible (Shamansky & Clausen, 1980). Tertiary prevention can be applied to both the parent and the child. For instance, if the child dies as a result of having ingested a poisonous substance, the parent may be helped by: (a) CHN; (b) grief counselling services; and (c) church or affiliation and other support groups.

If, however, the child suffers irreversible brain damage, tertiary prevention would take the form of referrals to special education classes, or other resources, in order to increase the child's maximum potential.

Who

Two stages of the family life cycle, according to Duvall (1977), are pertinent to our study. Stage II, the early child bearing family, is the stage wherein the oldest child is an infant through 30 months. Stage III, families with preschool children, is the stage wherein the oldest child is 2.5 to 5 years of age.

In stage II, the infant has certain developmental tasks. He is in a stage of dependency and is growing into a toddler, attempting to master his needs. The parental role changes from one of supplementing needs to allowing the child to express some mastery of his environment.

In stage III, life is more demanding and stressful for the parents as they must "design and direct family development" (Friedman, 1981, p. 55). The preschool child strives to become more independent and his needs to explore become more complex.

Infants characteristically grasp at anything and put everything grasped into the mouth, including poisonous plant leaves and flowers. By age 2, the child can, with relative ease, open cleaning preparation and medicine bottles. He is curious, climbs, explores and tastes. The incidence of poisonings declines between the ages 4 years and 14 years.

One American study demonstrated that families of young victims of accidental poisonings are white, lower middle class, and geographically and socially mobile (Sobel & Margolis, 1965). It is known that the population of British Columbia is increasing through immigration and that young families seeking employment are mobile.

White et al. (1980) found that in poisonings below the age of 2 years, there is a significant difference in sex: 78% male, 22% female. Sobel and Margolis (1965) found that more boys are poison repeaters in the 0-4 year age group, possibly because boys tend to be more exploratory, active, and behaviourally more problematic. However, Craft and Sibert (1977) found no significant difference by social class or sex in the 0-4 year age group.

Reported accidental poisonings in British Columbia in 1981 noted 1,933 (50%) males, 1,721 (44%) females, and 234 (6%) sex not stated in the 0-4 year age group. It is not tabulated which cases were poison repeaters.

Katz (1976) theorizes that the child may have a limited and frustrated relationship with his parents resulting in a struggle for autonomy and self-identity. He may take the poisonous substance knowing it is forbidden.

In one study of the behaviour of parents of poisoned children (Holden, 1979), it was found that the mother tends to be under 25 or over 31 years of age. The mother is the only parent in a significantly higher number of cases than in *control* families. The parental use of psycho-pharmaceuticals is also significantly higher in homes where the children have ingested poisonous substances than in the controls.

Furthermore, a higher number of case families receive public assistance than do control families, which may be due to the fact that in a higher number of these families only the mother is present.

Holden could not demonstrate significant differences between cases and controls with regard to (a) total number of persons in the household; (b) number of children less than 5 years old; (c) crowding; (d) education and employment of the mother; (e) knowledge about the medication; (f) storage precautions; or (g) type of packaging and labelling.

In Sobel and Margolis' (1965) study of 20 poison repeaters, 19 single ingesters and 13 controls, it was found that income, geographic setting and family size do not correlate with repeated poisoning in young children. They found that repetition is not related to accident proneness or pica. They were in agreement with Holden (1979) that an environmental hazard is the lack of parental supervision. Sobel and Margolis (1965) suggested, as did Katz (1976) and Craft and Sibert (1977), that ingestion of poisons is the result of purposeful behaviour on the part of the child correlated with hyperactivity, negativism, poor parent-child relationship, marital tension, and a tense and distant family atmosphere. Their suggestions have implications for the community health nurse.

Craft and Sibert (1977) concur with suggestions that the availability of poisons within the home is not an important factor, but that family stress is important. They also emphasize the personality of the child as being more active, immature, and uncooperative.

Katz (1976) found that the stressors exhibited in families "at risk" for accidental poisonings of children in the 0-4 year age group include serious illness in the family, maternal pregnancy, a recent move, the absence of one parent from the home, the presence of a mentally retarded child, and paternal unemployment. Family instability, disorganization, and unhappiness also seem to be factors in accidental poisonings.

Deeths and Breeden (1971) agree that poisoning in children has its base in the several factors cited above, and in (a) the availability of a poison in the child's environment and (b) the ability of the child to explore the environment.

IMPLEMENTING A PRIMARY PREVENTION PROGRAM

Accidental poisoning must be viewed in the context of the whole family, not as an isolated event. It is a sign of poor safety precautions and may signal a deeper disturbance within the family.

Broad Objective

The broad objective is to decrease the frequency of accidental poisonings in the 0-4 year age group from 2.03% to 1.00% in British Columbia within the 4 year period 1984-88.

Major Tasks

Major tasks will include: (a) identifying families at high risk for accidental poisonings; and (b) developing a "poisonings pamphlet" for parental at-home education.

Task I

Objective. To institute provincially the utilization of the "Poisoning supplement" by the CHN at the health unit level during the first home visit to the family with a newborn, as of January 1, 1984.

Questions to be included in the family assessment are: (a) Is the parent aware of some household plants being poisonous when ingested? (b) Are medicines and cleaning substances properly labelled and stored? (c) Is syrup of ipecac handy? (d) Is the family under stress, unhappy or unstable?

Steps in task I.

1. Approach the Public Health Nursing Department with data incidating trends in the accidental ingestion of poisons in the 0-4 year old group, 1975-1981.

2. Propose the use of the "Poisoning supplement" to identify the family at the first postnatal visit for potential early childhood accidental poisonings.

3. Propose that the CHN make a 9-month follow-up visit to families identified as a high risk potential for early childhood accidental poisonings.

Evaluation criteria.

1. Documentation of potential high risk families for early childhood accidental poisonings by the CHN in each health district.

2. Report on the 9-month follow-up visit to the high risk family by the CHN.

3. Number of cases in the 0-4 year old group per year of reported poisonings will be reduced from 2.03% to 1.00% over the 4 year period 1984-1988.

Task II

Objective. To propose the development of a pamphlet on poisoning potential of household plants for use in parental education, use to be implemented on January 1, 1984.

Steps in task II.

1. Approach the Public Health Nursing Department with data indicating trends in the ingestions of non-edible plants in the 0-4 year old group over the period 1975-1981.

2. Propose the development of the pamphlet for distribution at prenatal classes and/or the first postnatal home visit.

Evaluation criteria.

The ratio of noxious substances ingested as food will be reduced from .16 to .09 over the 4 year period 1984-1988 in the 0-4 year old group.

IMPLICATIONS FOR NURSING PRACTICE

The problem of accidental poisonings has implications for the community health nurse. Because there is variety in the incidence throughout the province, the nurse in each district should assess her community, perhaps utilizing Shamansky and Clausen's (1980) model as outlined in this article.

Evaluation of the proposed plan to reduce the incidence should be done through continuing research on a province-wide basis.

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RÉSUMÉ

Empoisonnements accidentels d'enfants d'âge préscolaire en Colombie-Britannique

Nous nous sommes servies d'un contexte épidémiologique pour évaluer les empoisonnements accidentels d'enfants âgés de 0 à 4 ans, en Colombie-Britannique, durant la période 1975-1981. Nous avons constaté que le nombre de ces empoisonnements était à la hausse. La recension des écrits à ce sujet semble indiquer que l'enfant qui s'empoisonne est un enfant à problèmes et que sa famille est généralement peu heureuse. Nous avons proposé un projet visant à réduire la fréquence des empoisonnements accidentels, en identifiant les familles à haut risque et en rédigeant, à l'intention des parents, une brochure sur les empoisonnements à domicile.

CONCEPTUAL MODELS

Joy Winkler

A response to "Modèles conceptuels," by Evelyn Adam

Contemporary nursing literature discusses the place of conceptual models in the development of the discipline from many viewpoints. The Canadian Nurses' Association's position is that any definition of nursing is derived from a conceptual model, and that the basis for independent nursing practice must be an explicit conceptual model of nursing. These statements, coupled with the Association's position on baccalaureate preparation for entry to practice by the year 2000, and the rapidly increasing enrolment in graduate programs in nursing in Canada, require nurse educators to carefully assess how students may best learn conceptual models of nursing. Adam's paper "Modèles conceptuels" addresses the pedagogical issue of whether one or several conceptual models of nursing should underlie an educational program. The author presents several views on the issue, and her arguments in support of the position for one conceptual model in a curriculum are on the whole clearly and logically presented. It is a very useful paper for discussion from an educator well known for her expertise on the topic.

I support Adam's position of only one conceptual model at the base of a nursing curriculum. There are other reasons that she does not cite for taking this position. To internalize a conceptual model, learners require exposure to it in the multiple contexts of the didactic portion of the program, and repeated opportunities to apply it in practice. Models become real as they are debated and discussed, applied in practice, and tested in research. They are by definition abstract, understandable at different levels. The process of coming to see the relevance of the abstract concepts of a model to the real world of nursing takes time. It is easier for the teacher to help the student to see the links from the concrete to the abstract when both are concerned with just one model. Using one conceptual model as the framework for a curriculum does not preclude acquainting students with other views of nursing. Further, it is to be hoped that basing the curriculum on one model will foster students' ability to clearly articulate what nursing is, to themselves and others. That too is needed for the development of nursing as a discipline.

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* *Nursing Papers*, 1983, *15*(2), 10.

One section of Adam's discussion of what a conceptual model is, however, suggests to me potential difficulty for learners. Definitions and usage of terms in nursing, as in other disciplines, can clarify or confuse. The author distinguishes between model and theory, and gives the accepted definition of a conceptual model as an abstraction, a way of conceptualizing reality. She then goes on (p. 11) to equate a conceptual model with the unique and distinctive perspective of a discipline. On this point in her arguments I disagree. I equate the distinctive perspective of a discipline which shapes its approach to the generation, transmission, and application of knowledge, with the paradigm, or metaparadigm, of a discipline (Kuhn, 1977). Kuhn states that each discipline selects the phenomena which it will investigate, and a unique approach to how they will be investigated. The phenomena of the metaparadigm are *more* general and abstract than the concepts of the models which derive from it. The concepts of person, environment, health and nursing are generally cited as comprising the paradigm of nursing (Flaskerud & Halloran, 1983). Model builders may synthesize the concepts of the paradigm in different ways, and with varying degrees of preciseness. Analysis of conceptual models in current use demonstrates that in nursing this is indeed so. (Fitzpatrick & Whall, 1983). All models reflect the unique perspective of the discipline: Nursing's concern with persons interacting with their environments to achieve health. Differences lie in the posited relationships among the concepts, as well as in their definitions. It is difficult enough in learning about conceptual models to appreciate and understand their abstractness. Equating the higher level of the paradigm with the lower level of the conceptual model may further confuse the learner.

Stevens (1981) states that multiple models foster development of nursing's full potential as a discipline. True. However, overexposure of learners to multiple ways of explaining the practice of nursing during the process of learning to nurse, does not, to my thinking, foster a clear understanding of nursing. One conceptual model in a nursing program challenges the student to work towards fit of data from practice to the concept. The faculty is challenged to ensure that the model is consistently made explicit in all professional courses. It is an important way to develop a distinct professional identity for nurses.

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Adam replies:

I appreciate Dr. Winkler's support for several of the ideas I presented: the importance of a model in the development of a distinct professional identity, the necessity of basing a curriculum on one conceptual model and the legitimacy of indicating to students that other models exist. I applaud her warning about overexposure.

I think it is important that we also remain sensitive to the fact that the intent of a conceptual model, particularly its six major units, is to clarify the specificity of nursing — the discipline, not the gerund. The four concepts of the paradigm (person, health, environment and nursing) are of course essential to a broad and general framework for a nursing curriculum. It is the fourth of those concepts (nursing as a discipline) which is conceptualized in a model: *nursing*'s contribution to health, *nursing*'s vision of the person-client, *nursing*'s responsibility toward the environment. The first three concepts are important not only for nursing but for other health disciplines as well.

As Dr. Winkler points out, equating the paradigm with the conceptual model *for nursing* may indeed lead to confusion.

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INDEX

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