



NURSING PAPERS *PERSPECTIVES EN NURSING*

The Young Adult's Perception of the Effect
of Congenital Heart Disease on His Life Style

On the Structure of Time with Implications
for Nursing

A Continuing Education Workshop
on Human Relations Skills

The Influence of Nursing Interventions
on Chest Pain

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EDITORIAL

The last issue of Nursing Papers considered aspects of accountability and responsibility from a variety of perspectives.

It is important to recall that *accountability* is one of the criteria upon which the proposed program of accreditation of the Canadian Association of University Schools of Nursing rests. In determining the degree of accountability in a program, the accrediting team look for evidence of the extent to which professors in nursing teach students to respond to the individual patient or client.*

Accountability should be differentiated from the criterion of *relevance*. Relevance refers to the program in nursing being a response to the community served by the faculty of nursing and the university.

In considering *accountability*, the question is: Is the student's nursing a response to the individual person? In considering *relevance*, the question is: Is the program a response to its particular community?

Other criteria assessed in the proposed accreditation plan are *relatedness* and *uniqueness*. Relatedness refers to the parts of the program** fitting and working together toward the same ends; a sense of coherence, a wholeness. In seeking to achieve *relevance*, *accountability* and *relatedness*, *uniqueness* refers to developing and making use of resources*** to create a program which is particular to that faculty and its community.

F. Moyra Allen,
Editor,

* The patient or client may be an individual, a family, a group or a community.

** Parts of the program include goals, teaching of nursing, curriculum plans, faculty practice and research, and administration.

*** Resources include human — sociocultural, physical, financial, such as faculty expertise, healthy families in community, community values, socio-political power bases, opportunities for health action, consumer participation, etc.

Please note: The French version of this editorial will appear in the next issue (Winter, 1981).

THE YOUNG ADULT'S PERCEPTIONS OF THE EFFECT OF CONGENITAL HEART DISEASE ON HIS LIFE STYLE

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INTRODUCTION

Heart defects which were once completely untreatable and caused death in infancy are now being successfully corrected and many more individuals with these conditions are reaching adulthood. Some studies have investigated the effects of congenital heart disease on the child and his family. However, very little research has been done regarding the long-term psychological effects of congenital heart disease. By exploring how young adults perceive their condition and its effect on their lives, this investigator hoped to identify concerns and health problems encountered by these individuals both during childhood and as they adjust to the responsibilities of adult life.

THEORETICAL FRAMEWORK

This study was based upon three concepts regarding man, as described by Martha Rogers (1970). The overall concept is that "man is a unified whole". The impact of congenital heart disease on the individual would not be limited to the physiological alteration in the heart's functioning but would affect the whole individual. The second concept specific to this study is that man is constantly interchanging materials and energy with his environment. This constant interchange influences the individual's perception, his behavior and his total life style. Therefore the life style, perceptions, and responses of a young adult with congenital heart disease would be influenced by all events and interactions that occurred during his lifetime. The third concept, life process, describes development as a complex process evolving from man's interaction with the environment. If an individual's development during childhood was threatened by illness, hospitalization, surgery or abnormal relationships with his family and peers, his development as a young adult might be impaired.

THE LITERATURE

There is a paucity of research that has been done to investigate the long term psychosocial effects of congenital heart disease. The only available publication directly concerned with young adults investigated the quality of life of 102 adults with congenital heart disease and rheumatic fever (Ferencz, 1974). Though the main focus of this study was employment

and vocational choice in 23 to 27 year old men, several questions dealt with family and personal life. The results showed that familial conflict related to the heart disease occurred with 22 percent of the subjects. Thirty-two percent of the total sample were worried about their children having heart disease. This finding was related more to the individual's experience with traumatic procedures, such as surgery, rather than to the severity of his disease. Thirty-six percent of the subjects described themselves as heavy drinkers, while 45 percent were smokers. A history of heart disease made it difficult for patients to obtain insurance and employment, even if their hearts were normal or mildly diseased at the time. Job discrimination was experienced by 57 percent of the patients with moderate or severe heart disease. From the results of her study, Ferencz concluded that "the impact of the illness changed with successive developmental stages and often became quite negative as adult life was entered" (Ferencz: 73).

PURPOSE OF THE STUDY

The purpose of this study was to identify the young adult's reported perceptions of his past and present life styles, and the effect of congenital heart disease on his way of life.

RESEARCH METHOD

This investigation was an exploratory study because of the paucity of research done in the area of psychosocial adjustment of young adults with congenital heart disease. The method of data collection was a semi-structured interview, using an interview schedule developed by the investigator. The questions sought information regarding the respondent's perceptions of his past and present life style and experiences related to his heart disease. Open-ended questions were used in order to provide the individual with an opportunity to discuss freely his perceptions, feelings and thoughts. The interview was content-analyzed to identify the sample population's perceptions of personal experiences and of the effect of congenital disease on these experiences.

SETTING

Each subject was initially contacted at the congenital heart disease clinic of a large metropolitan general hospital at the time of his regularly scheduled visit. He was then interviewed in his home by the investigator as soon as possible after the initial contact at the clinic. When a spouse or a parent remained during the interview he/she was not asked to leave. Six interviews were conducted with the respondent's spouse in attendance and two other respondents each had one parent present during the interview.

SAMPLE

The final sample of 25 patients consisted of 14 males and 11 females. They ranged in age from 18 to 30 years. The average age was 24 years. Thirteen respondents were married; none were separated, widowed or divorced.

The respondents had a variety of congenital heart defects. Nine had diseases classified as being communications between the systemic and pulmonary circulation and sixteen had valvular and vascular lesions. Fifteen respondents had heart surgery. Two had heart surgery twice. Age at the time of surgery ranged from four days to 25 years. Eighteen respondents had cardiac catheterization; seven of these had two catheterizations, and one had three catheterizations.

Many respondents experienced multiple hospitalizations for a variety of reasons other than their heart condition, including infections, appendectomy, as well as many others. Only three respondents were never hospitalized and two others were never hospitalized for reasons associated with their cardiac condition.

DISCUSSION OF THE FINDINGS

Past Lifestyle

Perceptions of Condition and Hospitalization

The respondents' ages when they first became aware they had a heart condition ranged from four to sixteen years. Awareness of the cardiac condition seemed to be related to the time when surgery or catheterization occurred. Sixty-four percent of the respondents had surgery and/or cardiac catheterization within one year of the age when they first became aware of the cardiac condition. These traumatic experiences could have made such an impression that these individuals recall that time as being their first realization of the condition.

Seventy-two percent of the respondents lacked understanding of their condition during childhood. If explanations were offered to these individuals they were not understood or were misinterpreted. This finding is consistent with some of the research done regarding the child's perception of his body. Gellert (1962) interviewed 96 children, four to sixteen years of age, to identify how much knowledge they had about their body parts and their functions. Though most of the children had a fairly accurate conception of the heart's location and size, they had limited understanding of its function. Chapman (1977) interviewed 16 children, seven to twelve years of age, with congenital heart disease. She found that they had limited knowledge about their cardio-vascular system and particularly their cardiac defects.

Forty-four percent of the respondents stated they had negative feelings about their condition during childhood. They felt they were different from other children or feared surgery and a "decreased life span". All of the eleven respondents who expressed negative feelings about having a heart condition had had cardiac catheterization and nine had had surgery.

Sixty-four percent of the respondents remembered negative physical or psychosocial experiences related to their condition such as physical discomfort from injections, suture removal, sore arms after surgery or catheterization, and activity limitations. One man stated, "I had trouble relating to my peer group because of that. Not being able to participate in sports and things like that."

Three of the 15 respondents who had surgery could not remember anything about being in hospital for surgery. Eleven (92%) of the 12 respondents who remembered having surgery related a variety of unpleasant memories surrounding that event. No one aspect stood out as being most unpleasant. All eleven related memories of pain and physical discomfort such as suctioning, intravenous, removal of sutures and pacing wires and five of these recalled their fears of surgery and hospitalization. All but one respondent who remembered surgery thought that it was crucial for their well-being.

Cardiac catheterization was one of the most traumatic experiences associated with having congenital heart disease. Of the 18 respondents who had catheterization, 13 (93%) recalled unpleasant memories. (See Table I). Generally, descriptions of catheterization and the discomfort experienced were more vivid than those of surgery. Some comments made by the respondents follow:

I will never go through that again — ever... I think the part that bothered me the most is that I wasn't prepared mentally. They didn't explain anything... I was just scared. I was really scared... it was terrible. It made my heart flutter... I thought I was going to die...

Ferencz (1974) in her study of young adult cardiac patients, found that 37 percent of those who had cardiac catheterization chose it as the worst experience associated with their condition.

Though most respondents realized the significance of having catheterization, it was not viewed as essential to survival as surgery. Consequently, the perception of surgery might be less negative owing to its potentially positive effects on the individual as a whole.

TABLE I
TYPE AND FREQUENCY OF DISCOMFORTS
EXPERIENCED DURING CARDIAC CATHETERIZATION

Discomfort Experienced	Number of Respondents
Heat from angiogram	5
Sore arm or leg	5
Tube insertion	4
Fear of the procedure	2
Fear of death during catheterization	2
Nausea afterwards	2
Heart Fluttering	1
No discomfort	1
TOTAL	22

N = 14 Some respondents recalled more than one discomfort.

Perception of Relationships with Family and Peers

Fourteen respondents (58%) felt their parents treated them differently from their siblings. (One respondent did not have siblings). Eight indicated that their parents were overprotective (i.e. they restricted the child's physical activities or play). Six respondents felt they were pampered (i.e. given special attention). Similar findings have been previously documented by several investigators. Glaser *et al* (1964) found parents were reluctant to discipline the child with a cardiac condition. Linde *et al* (1966) found that children with cardiac conditions were more pampered and protected by their mothers than were a group of normal children. Overprotectiveness often occurs regardless of the severity of the cardiac condition. Bergman and Stamm (1967) studied a group of 75 children who had been labelled as having heart disease but had no evidence of it at the time of the study. Forty percent of the children had been restricted in some way.

Parental pampering and overprotectiveness could have affected the respondent's feelings about his condition. Of the 11 respondents who stated they had negative feelings about their condition during childhood, nine reported they were treated differently from their siblings. These individuals' feelings about their condition could be an indication that they were generally unhappy or discontent. Linde *et al* (1966) found that pampered children with heart disease tended to be frustrated and unhappy while normal children adjusted better to some pampering.

Nine respondents (36%) felt their condition affected their relationships with friends. They could not do things their friends did or were "treated differently" by them.

Most respondents stated they were reluctant to discuss their condition during childhood. Thirteen respondents (52%) did not openly discuss their condition with anyone. Only three indicated they discussed it outside of their families. One individual did not tell people because "I felt somehow weak and wouldn't tell anybody". Another woman commented "I guess it wasn't a topic you'd discuss. It was just there."

Perception of Activity during Childhood

Each respondent's level of activity during childhood was assessed. Information reported regarding participation in activities and sports, and the individual's limitations and restrictions were considered in determining levels of activity. Several references were used as guidelines for establishing criteria (American Heart Association, 1971; Larson, 1974; Larson and Michelman, 1973).

According to the system used for classifying activity, generally the respondents in this sample do not appear to have been overly restricted. Seventy-six percent reported they were at least moderately active during most of their childhood.

Generally, those with higher levels of activity appeared to be more satisfied with their activity. Five of the six who had low or sedentary activity levels wanted to be more active. And some who reported moderate or high levels of activity wanted to take part in more strenuous or competitive sports.

One-half of the respondents who had siblings reported their level of activity was lower than their siblings because of restrictions or limitations resulting from their condition. Thirty-six percent indicated that their level of activity was lower than both siblings and friends. Of these, fifty-five percent were in the sedentary or low activity group.

All respondents who reported high levels of activity or whose activity was lower than siblings or peers indicated that limitations or restrictions created problems, or they wanted to be more active but could not.

The impact of activity restriction must be viewed in relation to the individual's interests and his perception of the importance of activity. As one might expect, some respondents lacked interest in sports which accounted for them not being as active as they might have been. It is possible that their lack of interest could be related to the cardiac condition, but determining such a relationship was beyond the scope of this study. Within the general population, there are many children with no physical ailments who do not participate regularly in vigorous activity. A study

comparing activity of a control group with a group of children with congenital heart disease would be valuable in determining if children with cardiac defects tend to be less interested in sports and vigorous activity.

Perception of Education and Related Experiences

Table 2 shows the highest level of education achieved by the respondents. Seventeen respondents (68%) had not completed grade 12. The educational attainment of the sample was compared to that of the Ontario population. Of the Ontario population, aged 20-34 years, 61.76 percent had completed at least grades 11 to 13, including those who completed university degrees (Census of Canada 1971). Forty-eight percent of the sample in this study had completed at least grades 11 to 13.

The overall low level of education of the respondents could reflect the socioeconomic group attending the clinic used for data collection. The clinic might tend to cater to individuals who belong to low and average socioeconomic groups. Individuals who are more highly educated and possibly of a higher socioeconomic group might tend to make private visits to the cardiologist, rather than attend the clinic.

Having congenital heart disease directly affected the education or career plans of only three respondents. However, it did have a negative effect on school progress of almost one-half of the sample. Difficulties, such as missing grades and poor marks, could have indirectly influenced the individual's perception of the value of staying in school and of continuing his education. Lack of achievement could lead to feelings of inferiority and inadequacy, and ultimately contribute to dislike school and to leaving school early.

TABLE 2
HIGHEST EDUCATIONAL ATTAINMENT

Highest Educational Attainment	Number of Respondents
Less than grade 7	1
Completed grade 7 or 8	5
Attended high school	10
Presently in grade 12	1
Completed grade 12	4
Completed college	2
Attending university	1
Completed university	1
Total	25

N = 25

PRESENT LIFE STYLE

Perception of Condition

Seventeen respondents (68%) were experiencing symptoms related to their condition. Of these, ten had surgery. Table 3 shows the type and frequency of symptoms experienced.

When asked if their attitude toward their condition had changed since childhood, 14 respondents (56%) said it had. Three stated the only change was that they had greater understanding of their condition. Five respondents became more anxious and cautious because they felt their condition was a threat to present and future health and might possibly decrease their life span.

I'm more aware of it now... in those days I wouldn't think twice about what I was doing. I'd participate in most sports. Whereas today I just don't. I restrict myself. I think because I'm older now and I understand it more maybe. I understand the danger of it...

I have more respect for it now. The fear of dying is constantly there.

Six respondents became more positive and seemed to have learned to accept their condition. They realized that activity restriction was not necessary and that they could lead a normal life.

When you are a child it's hard to understand... You always say "why me"... right now there's nothing wrong with me. That's the way I take it.

I'm getting used to it. When I was a kid I thought I would die next year... But now that I've lived longer I think I'm going to live longer.

TABLE 3
SYMPTOMS EXPERIENCED

Symptoms	Number of Respondents
Short of breath, tired	9
Short of breath, palpitations	2
Short of breath, chest pain	1
Chest pain	2
Pain in incision	1
Palpitations, head throbbing	1
Hypertension, edema	1
Total	17

N = 17

Perception of Employment or Career

Twenty respondents (80%) were employed at the time of the interview. Of those who were not employed, none attributed their unemployment to having a heart condition. Most respondents were employed in occupations requiring some skill or where they were learning a trade or skill. However, none were employed in professional or administrative occupations. This finding reflects the generally low level of education of the respondents as reported in perceptions of past life style.

Only three respondents were refused jobs because of their heart condition. An additional nine respondents (36%) indicated that having a heart condition influenced employment in other ways. Of these, seven sought jobs that do not require a great deal of physical exertion, which could limit job opportunities for the unskilled worker.

Fifty-seven percent of those who had ever been permanently employed reported that they would have preferred another occupation. Of these, twenty-five percent did not pursue their preference because they were restricted by their heart condition. In a future study, the job satisfaction of a group of young adults with congenital heart diseases could be compared with that of a control group.

Reluctance to leave a job and get a more satisfying position might be due to fear that no one else will hire an individual with a cardiac condition. One-half of the respondents who had worked on a permanent basis did not tell their employers about their condition when they were hired.

Perception of Social and Physical Activity

The current level of activity was assessed for all respondents. The assessment was based upon occupational demands as well as participation in sports or other activities during leisure time. Several references were again used as guidelines for establishing criteria for classification (American Heart Association, 1971; Larson, 1974; Larson and Michelman, 1973). Sixty percent of the respondents were less than moderately active.

Each respondent's current level of activity was compared to his activity during childhood. The overall activity of the respondents was definitely lower than activity during childhood. For some individuals levels of activity would have been lower if work activity had not been considered. Those who had low activity levels during childhood tended to stay low and those with higher levels tended to become less active. Only five respondents who were moderate or highly active maintained those levels, and two respondents had higher levels as young adults than during childhood. This finding might not be peculiar to the population of individuals with congenital heart disease. It is perhaps a reflection of our society in general, where often activity decreases between twenty and thirty years of age.

Five respondents indicated that their condition influenced their choice of recreational activities. Four of the five were experiencing some cardiac symptoms at the time of the interview.

The activity of some individuals might have been indirectly influenced by their condition but they might not recognize or acknowledge that influence. Those who were more active as a child might have decreased activity as they got older because they felt it was detrimental to health. When younger they would be more likely to disregard any concern about activity because of peer influence.

Perception of Marriage and Relationships with Peers

Thirteen respondents, 7 females and 6 males, were married. Seven of the married respondents had children and five planned to have children. Two unmarried females (18% of the females in the sample) had children. This figure is considerably higher than Ontario statistics for the number of unmarried women with children. During the 1971 Census (Vol. 2, part 2) 0.2 percent of the female population in Ontario were the heads of their families and never married. None of the respondents' children had any known health problems.

All respondents were asked if they had ever had concerns about having children. Concerns about pregnancy and the health of their children were expressed by a total of 15 respondents. Females were mainly concerned about the effect of pregnancy on their heart condition. A total of six females feared they would have a difficult pregnancy or labor or that pregnancy would be too stressful for their heart. Nine respondents expressed concern that their children would have a heart defect.

Four unmarried respondents indicated that having a heart disease might have affected their ability to relate with the opposite sex. Four married respondents indicated that they felt their condition had some effect on relationships with their spouses.

The relatively small number of problems or concerns reported regarding peer and marital relationships would seem to indicate that this group had adjusted fairly well to marriage and peer relationships as young adults. Possibly respondents feel uncomfortable in admitting problems in this area, which could account for the small number of problems expressed. Of the thirteen who were married, six had their spouse with them during the interview. These individuals might be particularly reluctant to discuss marital problems with the spouse present. Spouses of the four individuals who related marital problems were not present during the interview.

Detrimental Health Behavior

The respondents were asked about behaviors that might be a risk to their health. Included in this aspect of the interview were questions about smoking, alcohol and drug consumption, and diet.

Fifty-two percent of the respondents smoked cigarettes at the time of the interview. Of the 12 who did not, 4 had smoked and stopped. The ages when they began smoking ranged from 9-20 years. Sixty-nine percent of those who smoked, smoked at least one half of a package per day.

Forty-six percent of those who smoked did so because they wanted to be accepted by their peers. All but one of these individuals started smoking between 9-16 years of age. Only one did not experience activity restrictions during childhood. This group could have turned to smoking to achieve acceptance from peers and to compensate for the loss they felt because they were not as physically active.

The detrimental effects of smoking are greater when combined with other risk factors such as obesity, decreased physical activity, and high cholesterol consumption. Though only three individuals who smoked considered themselves overweight, none of the smokers indicated that they tried to decrease their intake of high cholesterol foods.

When questioned about their diet, only two respondents indicated that they had tried to avoid foods high in cholesterol because it might be detrimental to health. Seven respondents considered themselves overweight and were aware of the need to keep their weight down, but only three had tried to decrease their weight. Six of these individuals had low activity levels and one was moderately active.

Both alcohol and drugs, especially if used in excess, are potentially harmful to various aspects of health. "Alcohol has been directly associated with hypertension, arteriosclerosis... and atrial fibrillation..." In addition "heavy drinkers may acquire cardio-myopathy" and be more likely to have heart attacks than moderate drinkers (Health and Welfare Canada, 1976). The respondents seemed to be aware of the hazards of using alcohol and drugs. Many of those who did not use drugs feared they would be harmful to their health.

Alcohol use of the respondents in this sample was compared with the latest Ontario statistics. Eighty-eight percent of the sample used alcohol. A 1976 survey of alcohol use in Ontario showed that 90.6 percent of those between 18 and 29 years of age used alcohol (Alcoholism and Drug Addiction Research Foundation 1976-1977). The overall percentage of users was 80.5. Therefore, the percentage of users in this sample is fairly consistent with Ontario statistics.

Similar statistics were not available for patterns of drug use in Ontario or Canada. Three individuals (12 percent of the sample) were drug users when interviewed.

Perception of Present Concerns

The respondents were asked to identify their main concerns about their present life. Most of the respondents' concerns about their present life

were typical for their stage of development. They were concerned about becoming established in an occupation and marriage and wanted an enjoyable life. Seven respondents mentioned health as an area of concern.

The respondents were then asked specifically if they had concerns about their health at present. A total of 16 individuals (including those mentioned in the preceding paragraph) voiced some concern about their health. Of these, eight were concerned only about maintaining health or keeping their bodies in good condition (i.e. exercising, not smoking or gaining weight). Eight (32%) related concerns specific to their heart condition such as fear that future surgery would be needed or that their heart condition would deteriorate. For four of these individuals, their heart was the main concern in their life at the time of the interview.

When asked about their concerns regarding their future health, an additional 5 respondents expressed concern that their condition would deteriorate or that they would have a shorter life expectancy.

Implications for Care

Because of the tendency of parents to overprotect and pamper the child with congenital heart disease, the development of a good-parent child relationship with open communication would seem to be essential. Such a relationship can be facilitated by providing the parents with clear explanations of the child's condition, his prognosis, treatment, and limitations. Parents could be encouraged to treat the child with congenital heart disease normally. It would seem that it would be important for them to be realistic about their child's activity and, when possible, allow him the same responsibilities as his siblings. Parents could be encouraged to discuss the child's condition, symptoms and limitations with him at a level appropriate to his age. Such openness will hopefully encourage the child to discuss his feelings, concerns and problems with his family.

A clinical nurse specialist or public health nurse could be responsible for providing continuity of care. Follow-up visits to the patient's home could reinforce and clarify information given during hospitalization or the clinic visit. In addition, seeing the patient and family in the home environment would enable the nurse to assess their adjustment, especially after initial diagnosis, and to identify actual or potential problems the family might have.

Many respondents remembered surgery and cardiac catheterization as being traumatic and fearful events. This finding reinforces the need for thorough preparation for hospitalization and intrusive procedures. Some preparation might be done more effectively by a nurse in the home before the individual is hospitalized. After surgery or cardiac catheterization, the patient can be encouraged to express negative feelings. Follow-up home visits would be helpful to determine whether the patient and family have adjusted after hospitalization and to identify potential problems.

As the individual with congenital heart disease reaches adolescence and young adulthood, explanations about his condition must be revised in accordance with his increased level of understanding. Health education is essential, particularly as it relates to risk factors that could contribute to further cardiovascular disease. The chances of having a child with congenital heart disease should be discussed with all individuals with congenital heart diseases. The risks of pregnancy should be explained to young females. In addition, information about family planning should be available. In order to be most effective, it would seem that these interventions should begin to be implemented during pre-adolescence.

Some individuals might not be aware of behaviors or aspects of their lifestyle that could be potentially harmful. They might need help in identifying aspects of their lifestyle that could be a threat to their well-being. The young adult's feelings and thoughts about his condition and its effect on his life should be explored. Step must be taken to alleviate unrealistic fears and concerns and to help him with any real limitations or problems his condition might be creating.

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RÉSUMÉ

Effets d'une cardiopathie congénitale sur le mode de vie: perceptions du jeune adulte

Le chercheur a interviewé 25 jeunes adultes âgés de 18 à 30 ans chez qui on avait posé un diagnostic de cardiopathie congénitale au cours de l'enfance. On a analysé la teneur de l'entrevue afin d'identifier chez les sujets les perceptions d'expériences personnelles et l'effet d'une cardiopathie congénitale sur ces expériences.

Les données recueillies révèlent que les sujets qui ont répondu au questionnaire ont connu différents problèmes et préoccupations au cours de leur vie. Dix-neuf d'entre eux ont fait état de préoccupations ou de problèmes au cours de l'enfance qui étaient liés à leur atteinte cardiaque. Les limites au niveau des activités et les relations interpersonnelles étaient à l'origine de leurs plus grands soucis. Vingt sujets ont connu à l'âge adulte certains problèmes et certaines inquiétudes à cause de leur cardiopathie. Les soucis mentionnés le plus fréquemment avaient trait à l'emploi, aux relations interpersonnelles et à la santé.

ON THE STRUCTURE OF TIME WITH IMPLICATIONS FOR NURSING

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*The child lives in the minute
The boy in the day
The instinctive man in the year
The man imbued with history lives
in the epoch
The true philosopher lives in eternity.*
Bertrand Russell

ON THE STRUCTURE OF TIME

Introduction

The importance of a person's time structure has barely been explored in nursing. Since periodicity has increasingly been recognized as an important variable in a person's functioning, studies on biorhythms have received greater emphasis in recent years^{1, 2}. But these rhythms do not seem to provide any useful explanation of time experience. The judgment of the passage of time, the subjective importance of differences in emphasis on time among people has hardly been investigated. Like all physiological responses, time judgment must also depend on metabolic reactions. It stands to reason that any condition which affects the metabolic rate and influences perception will alter the subjective estimation of time. The judgment of time passage is a learned skill and is influenced by the qualitative and quantitative aspects of the individual's environmental experiences as well as by the subjective interpretation of the perceived events. To individualize nursing interventions, an effort needs to be made to develop objective measurements for monitoring a patient's progression and eliciting predictable responses. The time structure and the effect it has on a person's behaviour and functioning in a given environment needs to receive greater attention in nursing.

A. The Development of a "Sense of Time"

The concept of time, as far as we can know, is unique to man. An animal may remember past events but the concept of a "past" and even less of a "future" is outside of its experiential knowledge. It follows that a non-human creature experiences only the present and cannot conceive the inevitability of its own death. Probably this realization of finitude, rather than the discovery of fire, separated man from the rest of creation and directed the destiny of civilization. A person's view of life and

perspective of the world, the preferences and values to which he adheres, are essentially a view of time. Primitive man with his magical thinking, lived in a continual "now", the way a child experiences time. His life centered around the seasons, the daily fluctuations of light and darkness and the necessity to provide for his basic needs. Through civilization man learned to look with verifying eyes at both time and space and to create his world through language, history and art³.

The development of the ability to experience and to estimate time occurs gradually as the child matures. Waiting periods between feedings are the culturally determined time-setters and make the infant consciously aware of the flow of time. Although controversy exists on what cues are the most consistently integrated time-setters, there is general agreement that the time sense increases with diminishing egocentricity. A sense of the duration of time is not developed until after the age of five or six years and continues to develop through the 13th and 14th year. This abstract concept of time duration, characteristic of technological societies where goods cost time or money, seems to be absent in many other cultures. Thus the relationship of personal experience of events to conventional units of time is learned and depends upon the cultural setting from which a person originates⁴. "People of the Western world, particularly Americans, tend to think of time as something fixed in nature, something around us and from which we cannot escape..."⁵.

All our intellectual, emotional and perceptual experiences are interwoven with time, and we are usually aware of the continuous passage of time. Thus, although we experience time, "we cannot taste it, see it, smell it, hear it or touch it"⁵ and no time organ has been identified, although we speak of a "sense of time". Some biologists and physiologists have postulated a sort of "time base", that is, a repetitive cumulative pulse dispensing mechanism termed the "biological clock".

To date, no "master-clock", capable of synchronizing all internal, periodic, physiological processes and shorter biological rhythms has been identified. Various experiments have established a correlation between different physiological cycles and time estimation; but in terms of the subjective meaning of time duration, this correlation cannot be made, as "real" time for an individual cannot be equated with the clock time of minutes and seconds⁵. Our clock is but one arbitrary means of defining time.

The literature on time perception centres on two opposing views. One view claims a linear and positive relationship among the presented stimuli⁵. It states that with increased stimulus complexity, estimation of the duration of time increases. The opposing view shows a negative association between the experiential complexity which fills a given interval and assessment of time duration. As a result, a shortened time period is experienced with increased stimulus complexity⁶.

Opposing both views is the common sense observation that the more actively we process environmental stimuli, the more swiftly time seems to pass, while, conversely, time seems to progress more slowly the less actively we experience given stimuli.

Although the twenty-four hour day is our most important social time unit, "real" time does not conform to seconds, minutes and hours and does not progress at a uniform speed. Einstein, when asked about the paradox of the subjective time experience, answered that time is "relative". Whenever he was sitting with a young girl in his arm in an amorous mood, hours flew like minutes, whereas sitting inadvertently on a hot stove, minutes felt like hours. Both views can be reconciled by the hypothesis that time perception is not a linear but rather a U-shaped function of both personality and stimulus complexity⁷.

B. Illness and the Aspect of Time

In recent decades among industrialized nations, we have ignored our biologic vulnerability to geophysical influences, and have come to expect from our bodies the consistent performance of a machine. Whether we are compelled to adhere to strict time tables or whether we exert all efforts to escape from them, the basic need is the same. We cannot do without positions that are fixed in space and repetitive in sequence. During illness, hospitalization or sudden life-threatening events, the usual concept of time undergoes a major shift in orientation. As a result, values change drastically and the focus is narrowed to immediate priorities.

A discrepancy is apparent between the patient concerned with his present status and the staff who fail to take the patient's time orientation into consideration and are more concerned with future health goals; hence, the patient may feel his concerns and problems minimized or negated by the members of the health team. Because of the shift in emphasis of orientation from a future to a present time basis, and the resultant change in values and goals, people who lose track of time often experience panic and disorientation.

Fogel proposes a hypothesis for studying the whole patient. In it, man is defined basically as a total concept of self in relation to the environment⁸. The components of Fogel's "Total-Self" are body image, environment image and the time concept. Any changes in one component alter the whole organism and have to be considered. Studies of psychiatric patients and experimentation with psychomimetic drugs have documented many uncanny temporal experiences (eg., the experience of timelessness, coincidence, déjà vu, precognition)⁹, with accompanying alterations in behaviour, supporting the view that the orientation to time is necessary for a person to function coherently.

Assessment of time distortion has been found as an easily administered test of clinical significance when monitoring patients following some drugs induced psychosis¹⁰. Physical factors related to the illness seem to be the most important aspects in psychological adjustment. It has been suggested that mild intellectual impairments are associated with a better adaptation and prolonged survival time in illness. These mildly impaired patients possibly experience a diminution of interests and concerns and an altered time sense, all of which help to reduce their anxiety and despair over future difficulties¹¹.

Here a patient's flight into a different time frame as a survival and coping mechanism may be interpreted as therapeutic. Whether the patient experiences the present as valueless, feels a sense of liberation in escaping the rigidity of time schedules, or becomes confused as environmental cues conflict with his subjective experience, the importance of a person's time structure needs further investigation.

There can be little disagreement that failing physical power and the loss of mobility have a profound effect on individual experience, including the person's experience of his time¹². However, whether this alteration of human structure and consequent variation in time perception universally occur in disease have not been answered in previous studies.

C. Time as Adjunct to Tailoring Nursing Actions

In nursing, concerned as it is with the care of people, we try to individualize the therapeutic relationship and find ourselves puzzled that often our best efforts are not appreciated as such by the clientele we serve. Increasingly, we hear about the "quality of care" and about the consumer's concern regarding the cost of health care delivery. The assessment of the quality of nursing care has been recognized as a critical problem in the profession for a long time. What is under dispute is the definition of the components of the "quality of care". Basically, no two people see eye to eye on this topic. There has been a tendency to treat all variables as though they were equally important although, at the present stage of knowledge, there is no universal criterion that fit all situations and all frames of reference. Relevant and unbiased criterion variables which can be used in the care of patients are not available. A valid evaluation of patient care, and subsequent nursing intervention, must take into account the person's time perception. It is with this view on how the patient experiences nursing care, and what may sway his evaluation, that time perception becomes an issue.

Of all cultures, that of the present-day Western world is most frantically time-conscious. This hardly seems a coincidence. Yet, one of the most overlooked dimensions in human interactions is the aspect of time. This applies to ingrained views regarding our daily habits or, more importantly, to the way we treat people who are sick³.

The idea that there could be such a thing as temporal vulnerability may sound speculative, due mainly to our lack of knowledge and research in human timing¹². However, once it is possible to obtain data comprehensive enough to understand a person's time structure, it may become possible for nurses to individualize their interventions. A preschool child has visions that an event will take place within the next few minutes when told it will be "soon". A teenager may interpret the same time frame, depending upon the circumstances, to mean hours or days. An old person may think in terms of weeks. In the nursing assessment, we ask patients about the expectations they hold regarding their hospitalization and illness. We identify the discrepancy between the reality of the situation and the patient's view, but have not tuned in to the importance of a patient's time frame. This is particularly relevant when interacting with different cultural groups or people for whom time is of no particular economic importance. In cultures where time is a process reflecting the seasons, man is part of that change. Considering transience to be part of the universe, mortality is not perceived as a threat to the ego, as it is in Western societies. Thus, the cultural concepts of time have a prominent influence on individuals and on major social developments, such as health care delivery.

Increasingly, nursing has to identify the variables which the nurse can influence, and how these factors can be utilized to measure the effectiveness of nursing actions. Quality of nursing care is, however, a multidimensional entity which cannot be evaluated by a single overall index. This aspect of the criteria for quality and the apparent independence of these dimensions make a total score for quality meaningless¹³. Before an evaluation of patient outcomes can be undertaken, relevant criterion variables must be identified and methods of appraising these variables developed. One major group of variables manipulated by the nurse is that of behaviour. Even when seemingly simple modification of patient behaviour occurs, methods which allow accurate prediction of the given intervention may be lacking.

The importance of physiological cycles has been recognized within the past decade. Periodicity is a common phenomenon in nature. The diurnal rhythms which humans develop and maintain evolve from being born into, and living in, a family and community oriented to alterations of light and darkness which in turn, result from the period of rotation of the earth around its axis¹⁴. Our distant forebears observed the seasons and used a readily available model for time, namely the moon, with its observable, regular and recurring cycles. Within our era of Western industrialized society, the prevailing perception tends to see man no longer as part of nature, but as a machine facilitated by our own artificial sun, electricity. These normal physiological cycles are disrupted by various

changes in a person's condition such as illness, prolonged immobilization, or drug therapy. Under such circumstances, persons are less able to accurately judge the passage of time and will often exhibit related behavioural aberrations. The occurrence of disorderly events will be found at the psychological level of behaviour as well¹⁴. Conversely, some patient-care environments, immobility, and unaccustomed daily schedules with nothing to do may be adding stress to a person's already precarious adaptation to his illness¹⁵. That a change in one physiological parameter affects the whole organism is recognized, but rarely is this utilized to gauge nursing intervention. For example, an elevation in body temperature changes subjective time perception¹⁶, but nursing care which does not capitalize on this information may unwittingly add to the stress imposed by illness.

For the Western mind, time is such a common attribute of all natural phenomena, that its consideration is generally assumed to be self-evident. By observing the changes in the environment we learn about the estimation of the duration and sequence of events. The individual has the ability to quantitatively estimate the duration of perceived events and to remember their temporal sequence. Both the degree of distortion of this ability and the importance of the experience of time to an individual as he moves along the well-sick continuum in either direction are largely nebulous at this point. In one study, temporal orientation was found to be inversely related with the level of education and of clinical significance¹⁷. However, most of our textbooks do not indicate that the time structure is sensitive to socio-economic variables. Although changes in time perception have been alluded to in the aged¹⁸, the assessment of orientation to time has been presented as uniformly significant.

The nurse as mediator between the patient and his environment can assume a pivotal role by monitoring psychomotor performance in addition to the usual vital signs. One easily introduced method for determining discrepancies could be to ask the patient to estimate the duration of one minute and compare the result with objective or clock time.

Although it is a truism that a nurse cannot practice beyond the boundaries of her vision, nursing is as broad as life, since it deals with people and hence necessitates sensitivity to the time and place when intervention will be most constructive. Recognition of individual differences in time structure and the diverse circumstances which affect it is but one of the many variables warranting consideration in the care of people¹⁹.

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RÉSUMÉ

Du schème temporel et de ses implications en soins infirmiers

L'importance de l'expérience subjective du passage du temps a reçu peu d'attention en sciences infirmières dans le passé. Pour faciliter l'administration des soins infirmiers, il faudra tenir compte du schème temporel du client et de l'infirmier, puisque toutes nos expériences intellectuelles, affectives et perceptuelles sont intimement liées au temps. Il ne fait pas de doute que l'orientation dans le temps soit nécessaire pour permettre à une personne d'agir de façon cohérente, comme le démontre bien la vogue des "psychothérapies axées sur la réalité". L'opportunité du moment de l'intervention de l'infirmier a fait l'objet de quelques commentaires, du moins en ce qui concerne les soins aux enfants, mais le schème temporel de l'enfant est rarement évoqué. L'évaluation du schème temporel d'une personne, la reconnaissance de son caractère individuel et le recours à une estimation de l'utilisation du temps comme critère de mesure du progrès d'un malade sont autant d'éléments qui demandent à être étudiés dans le cadre des soins à prodiguer.

RESPONSE

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Underscoring Ms. Schilder's overview of the time dimension in human affairs is her argument for greater attention to this variable in the practice of nursing. One measure of the relevance of this argument could be the extent to which it elicits, from practising nurses, evidence of clinical problems which involve time phenomena.

At the Health Workshop, we first noticed the importance of tempo, rhythm and periodicity when we attempted to offer immediate service and speedy follow up to a suburban clientele. In response, most of our clients negotiated a working relationship which would accomodate rather than interrupt their busy lifestyles.

One mother of three teenagers sought assistance for her family which was having difficulty incorporating an elderly grandfather into the home. She thought it important to involve the children in discussions of the situation but hesitated when the nurse offered an evening appointment

with the whole family at The Health Workshop. "You know what teenagers are like. They come home to eat and sleep... always on the go. You have to catch them on the fly." She thought over the pattern of day-to-day family life. "They all land in the kitchen at four o'clock and my husband comes home shortly after that. It sounds chaotic but could we try something then, around the kitchen table?" Periodically, each day, the varying tempos and rhythms of this lively group of individuals coincided and that was when the family could easily set aside time for working on health as a unit.

More recently, in a rural community, we have had to accomodate the less crowded but rigidly patterned seasonal rhythms of the farming lifestyle. Over the winter, people prefer to come to The Health Workshop. They have time to participate in group projects and enjoy working together on health matters. But during the intensely busy hay-ing season, most of our nursing takes place with individuals in the home, over the telephone or at a chance meeting on the side of the road.

In the community, the time variable does enter significantly into the process of building working relationships with people. How does this compare with nursing practice in acute and chronic care settings?

The structure of time also comes up, explicitly or implicitly, in the situations which families bring to a community health service. Rural families worry sometimes when a son or a daughter at school in the city begins to come home less often. "What is he getting into?" "Is she forgetting her family already?" By talking it over as a family they soon discover that two weeks for the youngster in the city is like one week for the members at home. It seems a small matter but unless discussed, one which can strain family relationships.

Our suburban clients point more explicitly to a "treadmill existence", "the hectic pace of living" and conversely, "too much time on my hands" as problems influencing their own health and that of the family.

One widowed mother of two children, employed full-time as an elementary school teacher, sought assistance in "managing" her time. She complained of a lack of "serenity" in her life, of feeling tense and having no time for herself. When she mapped out and examined with the nurse a one week sample of her daily routines, she discovered brief but nevertheless regular periods of free time. Eventually it became clear that she could not achieve

her goal of serenity and enjoyment of living merely by reorganizing or reducing her responsibilities. After her husband's death several years ago she had so immersed herself in work that she had all but crowded out leisure. She had forgotten how to "seize the moment" whenever an opportunity to do nothing or to do something purely for her own pleasure arose.

These examples of some of our clinical problems would seem to support Ms. Schilder's argument for greater attention to the time variable in nursing. By accumulating such evidence, nurses could begin to incorporate her overview of the knowledge in this area into questions which we need to pursue to improve nursing practice.

**PROSPECTIVE STUDENTS FOR MASTER'S
EDUCATION AMONG STUDENTS
GRADUATING FROM CANADIAN
BACCALAUREATE PROGRAMS IN NURSING:
AN EXPLORATORY STUDY**

**by Barbara Dalby for the Canadian
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A CONTINUING EDUCATION WORKSHOP ON HUMAN RELATIONS SKILLS

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Nursing has long been considered a profession directed towards helping others. However, in the nursing world of today, with so many technological advances, and such rapidly changing scientific knowledge demanding time and attention, the interpersonal skills which are basic to a helping relationship are not, in the author's estimation, being adequately developed.

Increasing levels of technology have resulted in a dehumanization of health care. Consumer groups are voicing their dissatisfaction. If one listens closely, it is usually lack of human contact rather than physical care which is being condemned. Patients complain of being treated like numbers, of being made to wait long, anxious periods for tests and consultations, and of inadequate or non-existent explanations regarding their conditions or treatments.

The time has come for intensive human relations skills training for nurses and all other health professionals. The majority of nurses who enter the nursing profession do so because they genuinely care about, and want to help, others. Unfortunately, this is not enough. The ability to communicate effectively and truly help others is for most a skill that must be learned.

Research conducted by La Monica in one health care facility showed that many of the nurses possess extremely low level of empathy. A subsequent human relations skills program was effective in improving this situation¹. The need for a proliferation of such programs cannot be overemphasized.

In a doctor-patient relationship, the trust that a patient has in his doctor is directly related to his following the doctor's directions, paying his bills, and recommending the doctor to his friends². The same kinds of positive results could be expected from a trusting nurse-patient relationship.

¹La Monica, E.L.: "Empathy Training as the Major Thrust of a Staff Development Program". *Dissertation Abstracts International*, Aug. 1975, p. 784.

²Gazda, G.; Walters, R.; Childers, W.: *Human Relations Development*. Allyn & Bacon, Inc., Boston, 1975, p. 2.

Nurses in all areas must be able to relate effectively with patients, family members, and other health care workers. Unfortunately, many generations of nurses have not received adequate training in this vital and essential area.

Realizing that human relations skills development requires increased emphasis, and in response to an expressed desire of Nova Scotian nurses for continuing education in this area, a two day workshop was designed and presented by four faculty members of Dalhousie University School of Nursing.

Planning

There were many things to be considered in planning for a human relations skills program. Since the learning of any skill, including human relations skills, requires the active participation of the learner, it was decided to use a workshop approach.

The physical environment for the workshop needed important consideration. The atmosphere should be relaxed and comfortable. The room should have movable furniture conducive to the formation of small groups. Minimal outside distractions and a place away from the working environment of the participants were also desirable. Consequently, a local hotel was deemed to provide the best situation.

The modified Carkhuff model of Gazda, Walters, and Childers was selected in planning for the workshop because it encompassed the principles of communication skills that the workshop leaders believed in, and because it outlined a specific, structured approach which could be readily used in a workshop format.

Carkhuff's concept of a helping relationship includes three phases³: the facilitation phase, the transition phase, and the action phase.

In the facilitation phase, empathy, warmth and respect on the part of the helper are considered essential in the development of a base for a helping relationship. The importance of effective non-verbal communication during this phase is emphasized.

The transition phase occurs when the helpee is able to define his problem and accept responsibility for change directed towards resolution of the problem. The helper during this phase "...gently presses the helpee toward recognizing his (helpee's) role"⁴. The dimensions used by the helper during this phase are concreteness (ability to be specific), genuineness, and self-disclosure (revealing to the helpee's own experience of similar problems or conditions).

The action phase is Carkhuff's final phase in a helping relationship. In this phase the helpee "...takes appropriate actions to solve problems"⁵.

³Ibid, p. 13

⁴Ibid, p. 13

⁵Ibid, p. 13

The helper's self-confidence and knowledge are crucial during this phase for he is expected to use confrontation (pointing out discrepancies), and immediacy (telling it like it is right now), to assist the helpee in solving his problem.

Carkhuff has also developed a means for evaluating the effectiveness of responses made by the helper. It consists of a four point scale for rating the overall effect of helper responses⁶.

Responses at level one of the scales are considered not helpful: damaging. They may make the helpee feel sorry he ever talked with the helper. Level two responses are classified as not helpful: ineffective. They slow down the conversation to the extent that the helpee feels he has to be careful about what he says. Level three responses are helpful: facilitative. They encourage the helpee to say more about his problem. Level four responses are helpful: additive. The helpee learns more about himself and becomes more able to help himself in the future⁷.

The length of the workshop was difficult to decide. Considering that both participants and workshop leaders had other work commitments, it was felt that two days would be the longest time feasible. This would provide approximately sixteen hours of working time and would only be sufficient to cover the facilitative phase of the model.

Gazda, Walters, and Childers, in their *Instructor's Guide to Accompany Human Relations Development*, state that twenty-five to thirty hours are required for mastery of the facilitative dimensions of warmth, empathy and respect. However, they do admit that significant increases in functioning have been achieved in less time. In this case, sixteen hours for the workshop would have to be considered a potential limitation.

The ratio of leaders to participants and the experience of workshop leaders also needed consideration. The workshop was to be based on Gazda, Walters, and Childer's modification of the Carkhuff model of human relations training as presented in their text *Human Relations Development: A Manual for Health Sciences*. The Carkhuff model has proven an effective training guide⁸, but research has also shown that adequate supervision is essential in human relations training⁹. Pfeiffer and Jones recommend that there be a pair of facilitators for every ten to twenty participants in a human relations skills workshop¹⁰. Thus, a maximum registration of thirty applicants was decided on for the workshop.

⁶Ibid, p. 254

⁷Ibid, pp. 116-117

⁸Seidenshnur, P.: "The Effects of Human Relations Training Upon the Work Atmosphere and Communication Skills of a Medical Units' Staff". *Dissertation Abstracts International*, April, 1975, pp. 5090-5091.

⁹Lithier, J. and Gustafson, K.: "Application of Supervised and Non-supervised Micro-counselling Paradigms in the Training of Registered and Licensed Practical Nurses". *Journal of Consult. and Clin. Psychology*. October, 1966, p. 709.

¹⁰Jones, J. & Pfeiffer, J.W.: *The 1974 Annual Handbook for Group facilitators*. University Associates Publishers, California., p. 179.

It is also important for the facilitators to be well qualified for their roles. Egan says "...it is a demonstrated fact that in human relations training, trainees not only fail to grow but even regress in training programs run by ineffective people"¹¹.

The four faculty members who would be conducting the workshop realized that although they had experience in utilizing the Carkhuff model with student nurses, this would be their first experience in a short term continuing education setting.

The workshop leaders were aware that the learners would probably feel "defensive" as well as "eager to learn" new ways of relating to others. It would be difficult in the span of a two day workshop for the participants to develop trust in the leaders and in each other, and trust is basic to the development of human relations skills. It was hoped that the skills approach to human relations would allay some of the anticipated defensiveness as skills may be perceived as a more tangible learning situation rather than a personality trait.

There was a possibility that some of the participants may be sent to the workshop by their employing agencies rather than requesting to go on a volunteer basis. Research has shown that volunteers showed gains in some areas of self acceptance while conscripts showed losses. "Given that a desired outcome of human relations training is greater self-acceptance, the results suggest the possibility of negative outcomes when participants are conscripted for a microlab experience."¹²

Having considered these limitations, the following objectives for the workshop were formulated:

1. Participants will understand the key concepts of the Carkhuff model for human relations training.
 - 1.1 Participants will be able to identify helper responses which convey empathy, warmth, and respect.
 - 1.2 Participants will understand the meaning of the terms: genuineness, concreteness, self-disclosure, confrontation, and immediacy of relationship, as applied to helper responses.
2. Participants will make facilitative (level 3)* responses to helpee problems in the facilitation phase of a helping relationship.
 - 2.1 Participants will demonstrate awareness of listening (attending behaviour) and other forms of non-verbal behavior in making helper responses during practice sessions.
 - 2.2 Participants will write "level 3" responses to post-test items.

¹¹Ibid., p. 226.

¹²Corneleth, T., Freedman, A., Baskett, G.: "Comparison of the Self-Acceptance of Conscripted and Voluntary Participants in a Microlab Human Relations Training Experience" *Journal of Community Psychology*. January 1974, p. 59.

The objectives were formulated with ease of evaluation in mind considering the available time for participant learning and the desire of workshop leaders not to use a "knowledge" examination in a continuing education program intended to be non-threatening to the learners.

The Workshop

The workshop was preceded by a pre-test consisting of four separate statements presumably made by someone seeking help. The participants were to write a response for each situation. The situations were either nurse-patient or nurse-nurse interactions. The pre-tests were rated and kept for comparison with post-tests to be written following the workshop.

The workshop then proceeded with an orientation to the Carkhuff model and skills training in the facilitation phase of a relationship. Terminology and key concepts were presented with particular emphasis being placed on listening skills, perceiving feelings, perceiving empathy, and communicating with empathy.

- * Level 1: response is not helpful but hurtful. It is destructive to the relationship.
- Level 2: response is not helpful to the helpee but does not in any way harm him. It may impede continuance of the relationship.
- Level 3: response is helpful to the helpee. It communicates empathy, warmth, and respect to him and encourages continuance of the relationship.
- Level 4: response is helpful to the helpee and additive to the relationship. It assists the helpee to clarify his problem and be more able to help himself in the future.

***Figure 1: Levels of Helper Response according to Gazda, Walters and Childers.**

Videotapes made by the leaders prior to the workshop were shown to illustrate the use of empathy, respect and warmth; in short nurse-patient or nurse-nurse interactions. They were intended to demonstrate the facilitative or first phase of the model. Phase two, the transition phase, and phase three, the action phase, were only briefly introduced as they could not be covered during the time constraints of the workshop.

Small group work with extensive use of rôle playing and video taping was interspersed between content presentations. Participants were encouraged to give feedback to each other as they practiced their new skills. A workshop leader was available at all times for reinforcement and clarification of problem areas.

At first the participants responded to and discussed prepared materials, but by the second afternoon they were introducing situations they had personally encountered and had experienced difficulty with. Participants frequently stated that they now felt better prepared to deal with similar situations in future.

The workshop closed with a post-test requiring participants to write responses to four separate situations. The average score for these were then compared with individual's pre-test averages.

Participants completed a questionnaire which included age, area of employment, basic nurse education, past experience with human relations skills development, and reason for attending the workshop. The questionnaire also asked if participants had achieved their own objectives and if they felt the workshop was relevant and directly applicable to their present nursing situations.

Results

Two workshops of the type described were held, and each had twenty-one participants. They were all Registered Nurses whose work situations varied, from all areas of acute and chronic care situations and community health nursing. A number of the participants held administrative positions in Nursing Service or Inservice Education.

All participants at both workshops expressed personal satisfaction with the results of the workshop, as did workshop leaders. Pre and post-test scores were the only concrete measures available to determine achievement of the objectives. Not all pre and post-test scores could be correlated. In three cases, individuals either arrived after the pre-test had been given or had to leave prior to the post-test so that only one of the tests were completed. Four of the pre-tests in the first workshop could not be scored because participants wrote how they would approach the situation rather than giving their actual verbal responses. This was probably due to inadequate instructions on the part of workshop leaders as it did not recur in the second workshop.

The average pre-test scores for the workshops were 1.5 and 1.6 with individual averages ranging from 1 to 2.75. Post-test averages were 2.6 and 2.5 with individual averages ranging from 1 to 3.

In the first workshop, sixteen participants completed and turned in both pre and post-tests. Of these, fourteen showed increases in their post-test averages. One participant obtained the same average on post-testing and one received a lower average on the post-test than on the pre-test.

In the second workshop, nineteen participants completed both tests. Sixteen showed increases in their post-test scores and three showed no change. No participants in the second groups received a lower post-test average.

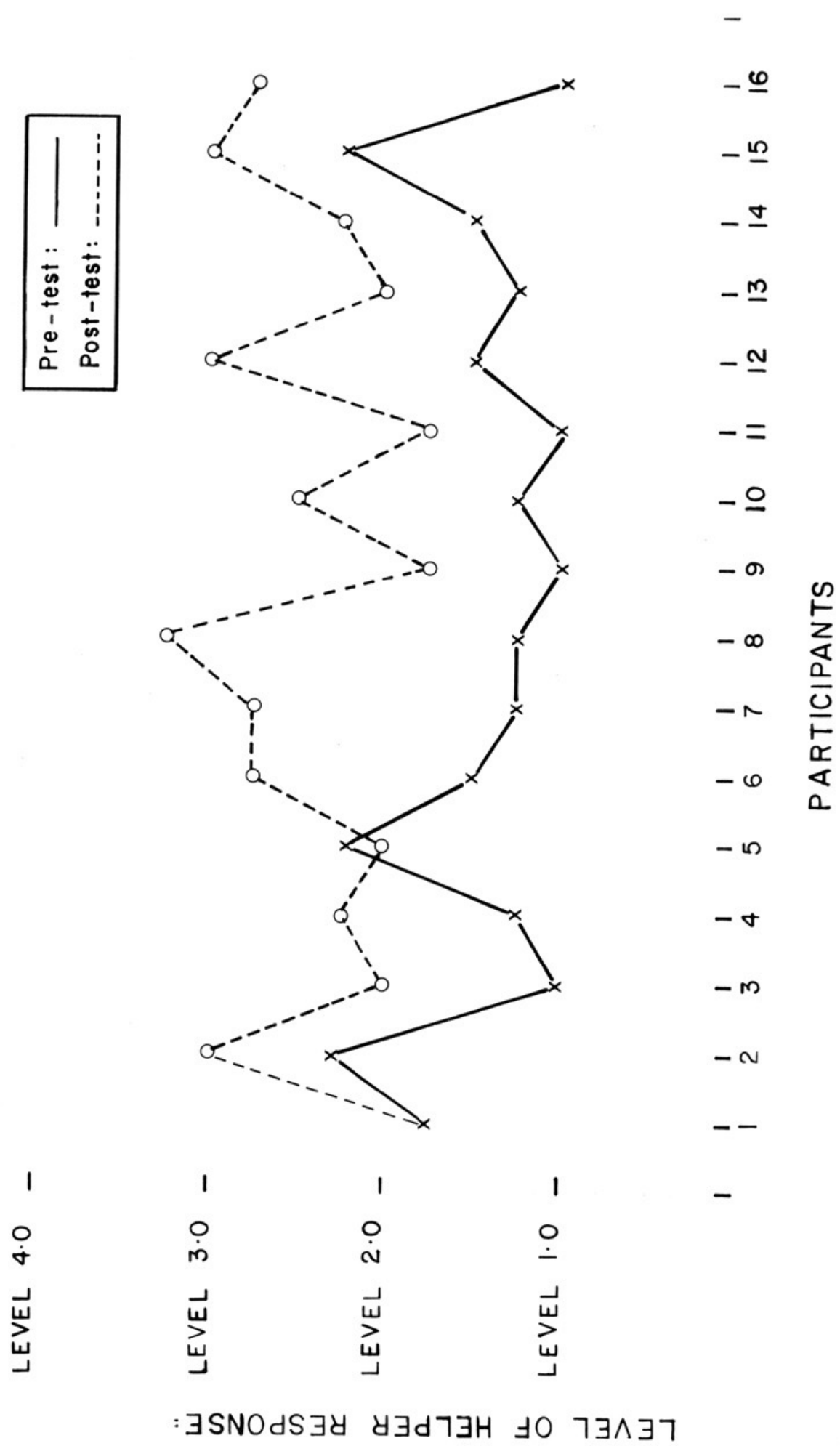


Figure 2: Comparison of Pre- and Post- test Averages for Workshop I

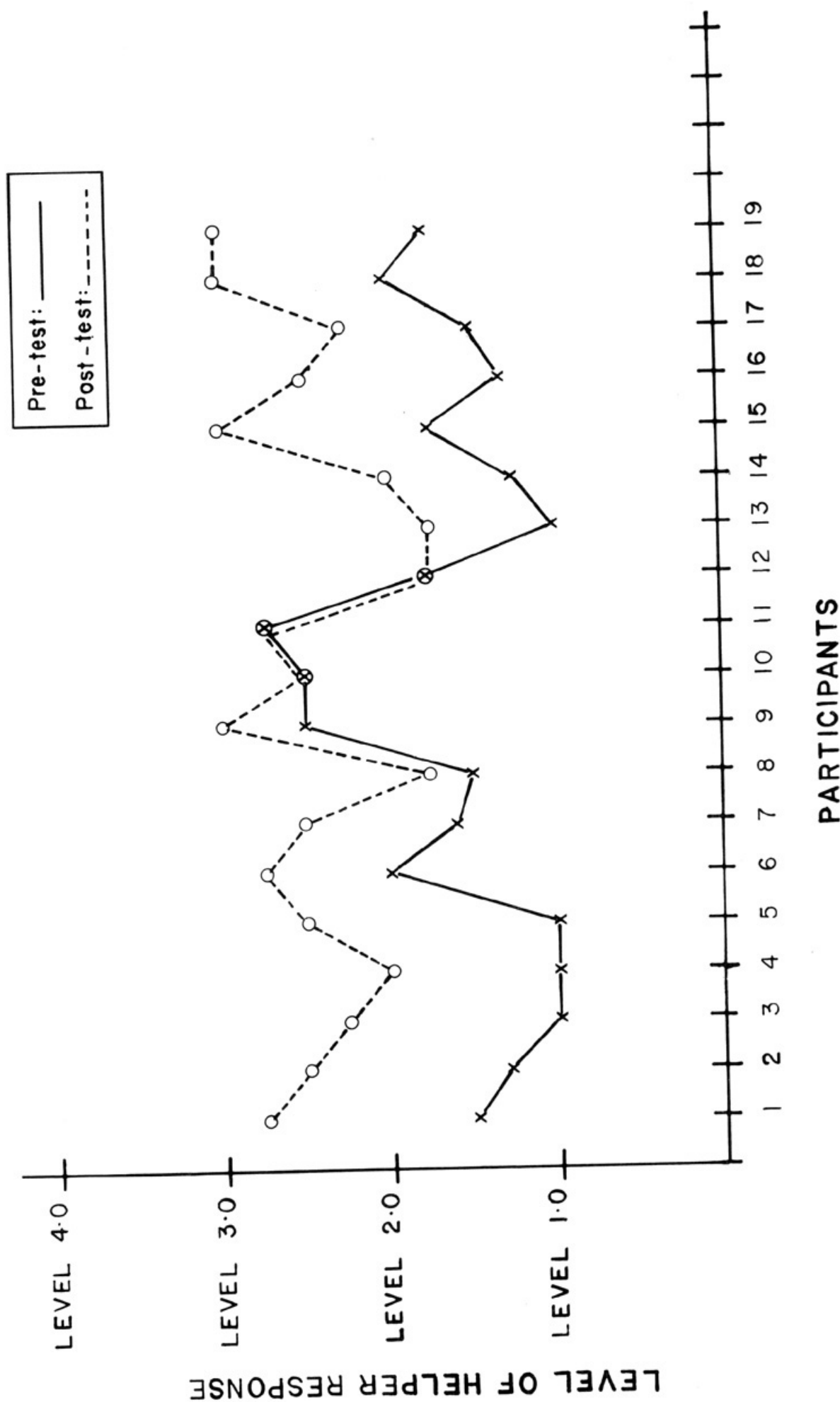


Figure 3: Comparison of Pre- and Post-test Averages for Workshop II

Conclusion

Although the objective was that participants achieve at least a "level 3" on post-test items and only eight participants achieved a post-test average of 3, the positive increases in the majority of participant's ability to make "helpful"* responses adequately demonstrated that the workshop had been beneficial.

It might also be noted that Gazda, Walters and Childers state that when trainees enter training they are typically functioning around levels 1.5 and 2.5 with the average at level 2.0¹³. In this case, pre-test scores averaged 1.5 and 1.6. Also, the time for the workshops was significantly less than the twenty-five of the thirty hours recommended by Gazda, Walters and Childers.

It must also be noted that although the workshop leaders had planned on having the pre and post-tests responses rated by four objective raters, this was not done. One workshop leader rated all pre and post-tests with two other leaders checking several of the tests to confirm the rating. This must be considered a limitation in evaluating the effectiveness of the pre and post-tests as a measure of workshop success.

As for evaluation of the objective stating that participants be aware of non-verbal behaviour in making responses, it can only be said that workshop leaders' subjective appraisals were that participants made significant gains in this area during role-playing sessions. For example, as observers and role players, they recognized and commented on the empathy expressed by eye contact and the loss of respect indicated by fidgeting and lack of attention. They were also able to identify empathy, warmth and respect in the verbal and non-verbal helper responses of workshop peers.

The success of the workshops was even more gratifying when the levels of motivation of participants was considered. Three of the participants who showed improvement openly admitted that their prime reason for attending the workshop was to receive Continuing Education Unit (C.E.U.) credit and this was the only credited workshop that they had been available in their area.

There did not appear to be any conscripts. All participants had come to the workshop of their own volition although many had been financially supported by their employers. Consequently, the detrimental effects of conscription in human relations training were fortunately not apparent.

A repeated comment on evaluations of the workshops was that participants had enjoyed their practical nature. They enjoyed being able to practice immediately the theory which had been presented.

*See figure I.

¹³Gazda, G.; Walters, R.; Childers, W.: *Instructor's Guide to Accompany Human Relations Development*. Allyn & Bacon, Inc., Boston, 1975, p.12.

It is noteworthy that the modified Carkhuff model proved to be an effective teaching tool when the participants ranged from one 1978 graduate to a retired R.N., and job situations were also as varied. All participants stated that the workshop had been a valuable learning experience whether they worked in hospitals, nursing schools, senior citizen homes, or the community.

Other than what they had received in their basic nursing education, only six of the participants had previously participated in any human relations skills programs. This would appear to further substantiate the fact that human relations skills does indeed need increased emphasis.

In closing, it should be reiterated that the modified Carkhuff model was an effective teaching guide in improving the human relations skills of participants. The fact that the majority of participants did not achieve level 3 averages on post-tests only serves to attest that this is truly a "continuing" education need, and work in this area is required for both participants and their colleagues who have still to partake of a similar program.

RÉSUMÉ

Atelier de formation permanente en relations humaines

Dans cet article, l'auteur propose un exposé sur l'évaluation du besoin, la planification, la mise sur pied et le bilan de deux ateliers sur les compétences en relations humaines organisés pour les infirmiers diplômés des régions rurales de la Nouvelle-Ecosse.

Les ateliers ont été fondés sur le modèle de développement des relations humaines de Carkhuff tel que modifié par Gazda, Walters et Childers; ils avaient pour but d'enseigner aux participants à être compétents au niveau de la phase 1 (phase de facilitation) d'une relation d'aide.

Le bilan de l'atelier a été fondé sur un questionnaire d'évaluation rempli par les participants et sur une comparaison des réactions des participants à quatre interactions infirmier-infirmier, infirmier-malade, avant et après le bilan.

On a noté chez les participants une amélioration de leur capacité à prêter une oreille plus sympathique au malade, à faire preuve de plus de chaleur et de respect, bien que la majorité des participants n'aient pas atteint le niveau souhaité par les animateurs de l'atelier.

L'étude présentait certaines limites, notamment, une durée trop courte pour réaliser des modifications du comportement; par ailleurs, l'objectivité entre les évaluateurs était suffisante pour permettre d'évaluer complètement les modifications du comportement qui ont découlé de l'atelier.

RESPONSE

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It is commendable that faculty members from Dalhousie University School of Nursing planned and implemented Continuing Education Workshops for nurses in rural areas of Nova Scotia. The workshops were held in accessible settings and the need for such educational input was identified by the nurses themselves. The design of the workshops; "Human Relations Skills" included an evaluation method and thus the effectiveness of the approach could be ascertained.

It is indisputably important for nurses to attain or maintain well developed interpersonal skills. The communication process can be viewed as the vehicle through which much of nursing is accomplished¹, and studies have illustrated the fact that the interpersonal skills of many health professionals need improvement². This reader feels, however that Joan Fisher's paper would have been more illuminating and that the workshop itself may have been more effective had the following been included.

- A summary of the current state of knowledge regarding the complexity of human communication.
- A literature review substantiating the author's claim that nurses' communication skills need improvement.
- An analysis of the effectiveness and suitability of various communication models and educational approaches.
- A discussion revealing the conceptualization that led to the selection of the modified Carkhuff model and an analysis of its strengths and weaknesses.
- A more comprehensive assessment of this group of workshop participants to determine the appropriateness of the proposed teaching plan.
- A critical analysis of the low post-test scores of workshop participants. Perhaps the model selected does not lend itself to being taught in three discrete sessions. Perhaps the evaluation or teaching methods were inappropriate for this group of learners. What would the author do differently if the workshop were to be repeated? What are the implications for educators in other settings?

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THE INFLUENCE OF NURSING INTERVENTIONS ON CHEST PAIN

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Does pain relief involve more than the nurse giving a pain medication, and later checking its effectiveness? A study of twelve patients experiencing 41 episodes of chest pain showed that over half of the nursing interventions observed were ineffective in pain relief.

Pain is the most frequent complaint that compels individuals to seek medical assistance (Clark, 1975). Because of the potential risk of death due to myocardial damage, chest pain is accompanied by great anxiety (Clark, 1975). Pain and the resulting anxiety can be physiologically disruptive to the myocardium due to the resulting increased heart rate, increased blood pressure, and the provocation of serious ventricular arrhythmias (Houser, 1977). Therefore, the identification of nursing interventions that may alleviate pain and its accompanying anxiety is important. This investigation was undertaken to explore the relationship of specified interventions and pain relief.

THE PROBLEM

The problem addressed was the following: what is the influence of specified nursing interventions accompanying drug administration on relief of pain of cardiac origin?

PAIN

Pain may be defined as "an abstract concept which refers to (1) a personal private sensation of hurt; (2) a harmful stimulus which signals current or impending tissue damage; (3) a pattern of responses which operate to protect the organism from harm" (Sternbach, 1968, p. 12).

Melzack's and Wall's (1965) gate control theory was utilized as the theoretical basis of the study. This theory asserts that pain impulses transmitted from nerve receptors that travel through the spinal cord to the brain can be modulated before they evoke pain perception and response (Melzack & Wall, 1977). It is proposed that the substantia gelatinosa, a highly specialized system of cells that extends the length of the spinal cord, serves as a gating mechanism (Melzack, 1973). Small diameter fibres of peripheral nerves open the gate resulting in pain, while

large fibres on the surface of the skin when stimulated, for example by rubbing, close the gate. The balance of these excitatory and inhibitory fibres determines the pain response. Factors such as past experience with pain, anxiety, and suggestion also can have an effect on the gate's modulating properties (Melzack & Wall, 1977). For example, anxiety associated with pain can increase the perception of pain by opening the gate (Melzack, 1973). Nursing interventions which focus on decreasing anxiety as well as pain would be employing the gate control theory.

Pain is also affected by other factors including the physiological effects of anxiety (Spielberger, 1966), the transmission of anxiety between nurse and patient in an unresolved pain situation (Sullivan, 1948), and the anxiety resulting from the helplessness experienced with hospitalization (Mandler & Watson, 1966).

RELEVANT NURSING STUDIES ON PAIN

Nursing investigators have found that specific nursing interventions which accompany pain relieving drugs can be more effective in pain relief than drug administration alone (Diers, Schmidt, McBride & Davis, 1972; McBride, 1967). In McBride's (1967) study, an attempt was made to modify post-operative pain by varying the type of nursing approach employed. The experimental group received comfort measures as well as pain medication. These patients had greater relief of pain than patients in a control situation in which activity was limited to only giving the medication. McBride concluded that the effective relief of pain may require, in addition to a pain medication, the relief of anxiety which can be aided by comfort measures.

Investigators also have reported that specific nursing interventions, without the use of drugs, can be effective in pain relief (Tarasuk, Rhymes & Leonard, 1965; Moss & Meyer, 1966; Moss, 1967). In the study by Tarasuk et al, a control group was cared for by the medicine nurse while the experimental group received care by a nurse with special communication skills. The experimental situation determined that 'pain' often was not the patient's prime problem. Only 31 percent of the patients requesting pain medication in the experimental group were assessed by the nurse to be in pain and received the medication, as compared to all of the patients in the control group who received medication on request. This study illustrated that effective nurse-patient interaction is important in the assessment and treatment of pain.

Returning to patients after a pain reliever is administered not only allows the nurse to assess the level of the patient's pain, but also gives patients an opportunity to discuss their pain. When patients are allowed to express their feelings toward their pain, then their level of anxiety may be decreased (McCaffrey & Moss, 1967).

Although a review of nursing research on pain relief revealed that various approaches to the alleviation of pain have been investigated, none can be found which pertain specifically to patients with chest pain.

METHOD

As a result of the review of research findings and the development of a theoretical approach to the study of the problem, four specific nursing interventions for the relief of chest pain were identified after the nurse and patient established the presence of pain:

1. the nurse administers a pain reliever to the patient.
2. the nurse administers a pain medication and verbally suggests that the drug should help to relieve the patient's pain.
3. the nurse administers a pain medication and returns to the patient within one hour of administering the drug to inquire as to the level of the patient's pain.
4. the nurse administers a pain medication and explores with the patient how pain makes the patient feel, i.e. frightened, angry, helpless, depressed, guilty or lonely.

A pain medication was involved in all the interventions, due to the seriousness of chest pain and its physiologically damaging effect on the heart if prolonged.

Combinations of these specified interventions were possible. For example, a patient could receive a pain medication accompanied by positive suggestion, and the nurse could later check the patient's pain status.

It is assumed that:

1. pain relief has occurred if the patient no longer complains of pain after the nursing intervention(s).
2. patients experience anxiety with their chest pain.

DESIGN

This study was exploratory in design and used observation as the primary method of data collection. Patients hospitalized in intensive care units because of chest pain were observed when nurses attended them for relief of their pain. Two hundred hours of observation with a very limited participant role (Pearsall, 1965) during one month in 1979 yielded 41 episodes of pain interventions. The primary investigator, who collected all data, was seated in an unobtrusive area and was able to see and hear all activity between the patients and the registered nursing staff. A patient questionnaire was utilized to obtain, as additional data, the patients' perceptions of various nursing actions frequently utilized when chest pain occurs. Patients' charts and the nursing kardex were utilized to determine the treatment regime for the patients, specifically drug therapy for chest pain.

Chest pain in this study was defined as a broad category of variations of pain due to myocardial ischemia, irritation, or pressure. This definition of pain would include the following forms of chest pain: angina, chest pain due to myocardial infarction, pericarditis, or chest pain due to dissecting aortic aneurysm. Because of the severity of a dissecting aortic aneurysm and the fact that surgery is required as treatment (Long, 1978) a decision was made to exclude this cause of chest pain in the investigation.

THE SUBJECTS

Twelve subjects (nine male and three female) from the Intensive Care Units of two metropolitan hospitals were involved in the study. All subjects who met the following criteria were included in the study: (1) those admitted with the diagnosis of myocardial infarction or chest pain of cardiac origin, except for chest pain due to an aortic aneurysm; (2) those present in the identified Intensive Care Units during the periods of observation; (3) those over the age of majority; (4) those who received pain medication while observations were taking place; (5) those able to read English or French; (6) those mentally capable of responding to the questions in the questionnaire.

The 41 episodes of pain interventions derived from the 12 subjects provided the data for the study. Since some patients were observed to require more than one pain intervention, these interventions cannot be considered to be independent, and this is a limitation of the study in interpreting the results.

The settings selected for this study were open concept Intensive Care Units in two different hospitals. This open setting allowed all activity between the selected patients and registered nursing staff to be heard and observed.

An instrument was developed to record the nursing interventions, and the pain reliever (narcotic or vasodilator) and the respective time for each of these were given. To allow for ease of coding, the four types of nursing interventions to be observed were operationalized. For example, the intervention which involved the nurse re-assessing pain status was operationalized as follows: the nurse's statement to re-assess pain status might be similar to the question 'Is your pain gone' or 'Do you feel more comfortable or relaxed now'. A one hour time frame had been set to allow the various pain relievers to take effect. This intervention included staying with the patient until pain relief had occurred.

Patients' perceptions of the interventions nurses perform for their pain relief were elicited by utilizing a five category Likert scale, with responses to 12 statements ranging from strongly agree to strongly disagree. The questionnaire was composed of the four specific interventions on which

the study focuses, plus eight other interventions derived from observation of nursing practice which might be carried out in helping patients with chest pain. These are given in Table I. An additional statement concerning the patients' feelings about their pain was included which was, "My pain made me feel:" and the possible responses were: depressed, angry, lonely, guilty, helpless, frightened, none of these.

Table I
Frequency of Responses to Patient Questionnaire

Item	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Total
I think it is important that:						
1. the nurse examines the painful area.	7	3	1	0	0	11
2. the nurse takes your blood pressure and pulse.	8	2	1	0	0	11
3. the nurse administers a pain reliever promptly.	9	1	0	1	0	11
4. the nurse asked you if you are in pain without you having to tell the nurse you are in pain.	6	2	2	1	0	11
5. the nurse gives you a backrub.	3	5	2	0	1	11
6. the nurse stays with you for five minutes when you are in pain.	8	1	2	0	0	11
7. the nurse reassures you that the pain reliever should help you.	9	1	1	0	0	11
8. the nurse asks you where your pain is.	10	1	0	0	0	11
9. the nurse returns in a few minutes after she has given you a pain reliever to see how you are feeling.	11	0	0	0	0	11
10. the nurse asks how long you have had your pain.	8	2	1	0	0	11
11. the nurse asks what has caused your pain and what makes it worse.	7	2	0	2	0	11
12. the nurse gives you a pain reliever and asks if your pain is upsetting you.	7	1	3	0	0	11

Questions were pretested with various patients who were having pain, including those with chest pain, and some questions were revised. The pilot study which followed indicated no further need for revisions. The questionnaire was administered to the patients the day after discharge from the Intensive Care Unit when stability of their cardiac condition existed. Content validity of the questionnaire is claimed as the items refer to interventions for pain relief found in nursing texts and the research literature, discussed previously. The reliability of this instrument used on 12 patients in this exploratory study was not assessed.

PHARMACOLOGY PERTAINING TO CHEST PAIN

Analgesics and vasodilators were employed for chest pain relief by the two Intensive Care Units. During the time period of this study, the patients comprising the study group received morphine sulphate and meperidine hydrochloride (Demerol) as analgesics, usually by the intravenous route. The Intensive Care Units utilized vasodilators, specifically nitroglycerin in sublingual or ointment preparations. Although the sublingual preparation was for complaints of chest pain, the ointment was administered on a regular schedule to those patients for whom it was prescribed, regardless of their pain status. The episodes of pain interventions were categorized into groups: those involving the administration of analgesics, and those involving vasodilators.

DATA COLLECTION

Permission to conduct this study was obtained from the Directors of Nursing Service of the selected institutions. Because the study did not involve any manipulation of the patient, patient consent was not required by the selected institutions. The nursing staff were informed that the investigator was observing the 'cardiac patient's response to care' and that further elaboration of the study, and the results, would be given upon completion. To avoid bias in the results, the staff were not informed in advance that pain was being investigated.

The day following discharge from the Intensive Care Unit to a general ward, the investigator visited each of the selected patients to inquire if they would consent to complete the questionnaire. Confidentiality was assured.

The pilot study determined if the observed interventions could be categorized reliably. Perfect inter-rater agreement was obtained between two independent nurse observers.

FINDINGS AND DISCUSSION

The findings represent the frequency of the interventions and the relationship to the pharmacology utilized. Of the 41 interventions recorded, 28 (68%) involved the nurse administering a pain reliever and either stay-

ing with the patient, or returning in order to assess pain status. Nine (22%) of the interventions involved positive suggestion: three using positive suggestion and the pain reliever; six using positive suggestion with the pain reliever and checking pain status. Four (10%) of the 41 interventions were confined to simply giving the medication. The intervention which was exploring the patients' emotional responses to the pain experience did not occur.

Since 34 (83%) of the interventions involved re-assessing pain status after drug administration, either alone or in combination with positive suggestion, this indicates that nurses are aware of the necessity to check the patient's response to pain relievers when chest pain is experienced. Nine (22%) of the interventions involved positive suggestion indicating that perhaps positive suggestion is not part of the usual repertoire of nursing care involving drug administration. From the findings, it is clear that the patients tended to receive care which was based on more than just technical skill. Further, nursing measures concerned with the physiological stability of the patient's condition were considered more important than concern for the patient's emotional responses to pain.

The effect of the specified interventions on pain relief is illustrated in Table II.

Table II
Number of Interventions by Type and Relief of Pain

Intervention Category	Pain Relief Pain Gone	Pain Not Gone	Total
Pain medication alone	3	1	4
Pain medication and positive suggestion	2	1	3
Pain medication and later checking pain status	9	19	28
Pain medication and exploring emotional responses to pain	0	0	0
Pain medication, positive suggestion, and later checking pain status	4	2	6
TOTAL	18	23	41

Table II also demonstrate that 23 of the 41 (56%) interventions did not result in direct relief of the patients' pain, and therefore further medication was required. This a very disturbing finding, considering the disruptive physiological effects of pain on the myocardium.

To fully understand the effect of the various interventions on pain relief, an examination of the drug therapy involved was warranted. Of the 18 interventions which resulted in pain relief, two utilized vasodilators, while 16 employed narcotics.

Two important relationships emerged to be evaluated: the type of intervention on pain relief, and the type of drug administrated on pain relief. To determine if there was a difference in the different nursing interventions with respect to pain relief, Chi-Square analysis revealed a significant relationship between the intervention in which the nurse later checked pain status, and all other interventions considered together (see Table III).

Table III
Number of Interventions when Pain Status Checked
and All Other Types by Relief of Pain

Types of Interventions	Pain Pain Gone	Relief Pain Not Gone	df	x ²
Pain medication and later checking pain status	9	19		
All other types	9	4	1	4.1

Similarly, when Chi-Square was applied to the relationship of drug type to pain relief, shown in Table IV, it is revealed that narcotics were much more effective than vasodilators in the relief of pain.

Table IV
Number of Interventions by
Drug Type and Relief of Pain

Drug Type	Pain Pain gone	Relief, Pain Not Gone	df	x ²
Narcotics	16	12		
Vasodilators	2	11	1	7.3

However, caution must be exercised in the interpretation of the findings. The physiological reactions of the drugs involved were based on only 12 patients. Also, a limitation in the application of the Chi-Square statistic is that the observations were not always independent since some patients had more than one intervention.

Table II demonstrates that the interventions with the highest success in pain relief were positive suggestion given along with pain reliever, and the technical administration of the drug. These interventions also involved a high percentage of narcotic administration. For example, 100 percent of the interventions involving positive suggestion utilized a narcotic, compared with 75 percent of those involving the technical administration of the drug. Because of the interaction of the two variables, narcotics and nursing interventions, it was difficult to determine whether pain relief resulted from the narcotics, the interventions, or both. These variables could not be separated in this exploratory study design.

The results from the patient questionnaire are reported in Table I. Only 11 patients responded to the questionnaire as one patient discharged himself early from hospital.

Table I demonstrates that the four most important interventions for pain relief, in the patients' perceptions, were those of prompt administration of a pain reliever, the use of positive suggestion with a pain reliever, the nurse checking the patient's pain status after drug administration, and the nurse determining the location of the patient's pain. The findings from the questionnaire also revealed that helplessness and depression were the most frequently expressed emotions of the cardiac patient.

The questionnaire results indicated that the overriding concern of both patients and staff was pain relief: it was imperative to attend to the pain rather than explore the emotional response to pain while physiological instability persists.

IMPLICATIONS FOR NURSING

The apparent efficacy of narcotics as opposed to vasodilators in the relief of pain provides impetus for further nursing research, most usefully in collaboration with pharmacy. Although the physician prescribes pain relievers, it is the nurse who administers them. Nurses are thus in a prime position to conduct studies in which the efficacy of various pain relievers on specific pain can be examined.

Nurses should be encouraged to ascertain the location of the patient's pain. Detailed assessment of pain was a patient expectation in this study.

The results indicated that nurses in the selected Intensive Care Units do determine the patients' pain status after administering a pain reliever, and that patients believe this is an important aspect of their care. Thus, this practice is important, and should be continued.

Nurses need to examine more fully the influence of suggestion on pain relief. The issue is raised as to whether nurses can influence the effectiveness of the drugs they administer. The nurses in the two Intensive Care Units employed positive suggestion only with narcotics. When being administered a vasodilator, the patients were reassured that another drug would be given if the vasodilator was ineffective. The nurses' statements when administering a vasodilator were similar to the following: "Try this, and if doesn't work I'll get you something stronger for the pain". Perhaps reassurance of another drug resulted in the patients doubting the effectiveness of vasodilators, negative suggestion in essence, and thus contributed to the resulting poor effect of vasodilators on pain relief as shown in this study.

RECOMMENDATIONS FOR FURTHER RESEARCH

Based on the findings, this study should be replicated with the following modifications: a sample of at least 60 interventions with one type of intervention per patient; control for the type of drug being used. If this replication takes place on a surgical floor, where pain is a frequent patient complaint, observation time can be reduced, or a larger number of pain episodes can be studied.

Due to the relative ineffectiveness of vasodilators, specifically nitroglycerin as revealed by this study, further investigation is recommended. A multidisciplinary approach to include pharmacy and medicine along with nursing is needed to establish the efficacy of nitroglycerin in the relief of chest pain. Also, nurses need to examine their use of positive suggestion in administering pain relievers. A controlled study would lend understanding as to the extent of the interaction of narcotics and the use of positive suggestion as a nursing intervention.

Further studies are needed with larger samples of interventions to investigate why over one-half of the nursing interventions did not result in pain relief. With a larger study group, statistical control of important influencing variables could be instituted.

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RÉSUMÉ

Effets des interventions infirmières sur les douleurs pectorales

Cette étude a examiné l'influence de certaines interventions spécifiques du personnel infirmier sur le soulagement des douleurs thoraciques. Tenant compte d'un schème théorique de la douleur et d'une revue d'observations scientifiques sur le soulagement de la douleur, les auteurs ont mis au point quatre interventions infirmières spécifiques dans le but de déterminer leur efficacité dans le soulagement de la douleur thoracique et l'anxiété qui l'accompagne: administration technique d'un analgésique, suggestion positive et administration d'un analgésique, contrôle de l'effet du médicament, administration d'un analgésique et entretien avec le malade sur sa réaction affective à l'expérience de la douleur. L'étude avait pour sujets douze malades hospitalisés dans une de deux unités de soins intensifs pour infarctus du myocarde ou douleurs thoraciques. L'étude, de conception exploratoire était fondée sur l'observation et ne faisait appel qu'à une participation très limitée de la part des malades. Bien que les résultats, déterminés par le test du chi carré aient révélé une différence d'efficacité au niveau du soulagement de la douleur entre les agents narcotiques et la nitroglycérine ainsi qu'une différence entre la démarche de l'infirmière qui contrôlait l'effet du médicament et toutes les autres interventions spécifiées considérées ensemble, les résultats ont été limités à cause de l'hypothèse de données indépendantes dans le test du chi carré. Une questionnaire permettant de classer les réactions des malades par catégorie selon l'échelle de Likert a révélé que les malades percevaient comme interventions les plus importantes, l'administration rapide d'un analgésique, l'utilisation d'une suggestion positive avec administration d'un analgésique, la vérification de l'effet du médicament par l'infirmier et la localisation de la douleur du malade par l'infirmier.

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