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A STUDY OF PAIN BEHAVIOURS IN POSTOPERATIVE PATIENTS

by

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### ABSTRACT

Sarah R. Addison: A Study of Pain Behaviours in Postoperative Patients

This study was designed to investigate behaviours which appeared to be related to pain postoperatively of forty patients on the third and fourth day after major abdominal surgery and nurses' responses to such behaviours. The method employed to identify and analyse these behaviours was that of participant observation and of concurrently collecting, coding and analysing data from the empirical situation.

Two main categories of patients' behaviours which were conceptualized as indicators of pain were identified from 292 behaviours drawn from the data. Indicators of pain which could be primarily seen by others were termed visual and those which could be primarily heard were termed auditory indicators. Subcategories emerged out of these two categories.

Three categories of nurses' responses were isolated; promise to give medication, giving medication and giving advice.

Patterns emerged out of both patient's behaviours and nurses' responses.

#### Patterns of Patients' Behaviours

1. From exhibiting visual indicators of pain to exhibiting auditory indicators of pain.
2. Exhibiting only visual indicators of pain.

In the 80 observation periods, there were 50 incidents of exhibiting only visual indicators of pain (pattern 2) and 30 incidents where patients moved from exhibiting visual indicators of pain to exhibiting auditory indicators of pain (pattern 1).

The findings showed that the nature of the indicators of pain demonstrated was related to the age of the patient, the type of surgery, previous surgery experience and time lapse after surgery.

Patterns of Nurses' Responses (as related to prior patient behaviours indicating the presence of pain) were discovered to be:

1. Responding to auditory indicators
2. Responding to some visual indicators
3. Not responding at all (most frequent).

It is suggested that some indicators are associated with a high degree of pain and others with a low degree of pain. One hundred and sixty-three (163) indicators of a high degree of pain were isolated and 129 of a low degree of pain. The proportion of high and low pain indicators was related to the type of surgery and time lapse after surgery. There were 17 responses to these indicators, 15 to indicators of a high degree of pain and 2 to indicators of a low degree of pain.

Indicators of pain occurred in clusters and each cluster usually contained some which were associated with high pain and some with low pain.

Four patterns of outcomes of behaviours followed the already identified behaviours; disappearance of the pain indicators, indicators of a high degree of pain were predominant and remained, indicators of a high degree of pain were predominant but changed to a predominance of indicators of a low degree of pain, and indicators of a low degree of pain were predominant and remained.

The findings also showed that there were more visual indicators, 234, than auditory indicators, 58, and yet most of the small number of nurses' responses were given to auditory indicators of pain. This suggests that nurses need to place emphasis on the continuous visual aspect of observation as well as the continuous assessment, planning, intervention and evaluation of intervention. Leaders of nursing can have periodic observation with nurses and encourage them to examine situations by asking questions of how, what, when, and why about the situations concerned. They can also record their observations and attempt to identify logical relationships.



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## CHAPTER I

## INTRODUCTION

Background to General Problem

This study deals with behaviours of patients which appear to be related to pain. The concept of pain has been of great interest to many people and much has been written about it. Pain is common to all human beings and each person has experienced it at one time or the other; but the nature of pain makes it difficult to be understood. Some writers make an attempt to define it since knowing what it is makes it easier to study and understand. It is agreed by writers that pain is a subjective feeling, that is; only the person who feels it can adequately describe it. Bakan, in writing about Disease, Pain and Sacrifice, says that pain cannot be satisfactorily defined, except as every man defines it introspectively for himself.<sup>1</sup> Whiting refers to the same thing when he says that although the nurse may sympathize and empathize with the patient, she doesn't feel his experience. She only experiences her psychological need to help others.<sup>2</sup>

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<sup>1</sup>D. Bakan, Disease, Pain and Sacrifice (Chicago: The University of Chicago Press, 1968), p.64.

<sup>2</sup>J.E. Whiting, "Patients' Needs, Nurses' Needs and The Healing Process", A.J.N., LIX, (May, 1959), 662.

Pain has also been associated with the personality of the person experiencing it. Personality influences the person's reactions to pain. Petrie talks about three kinds of personality, the reducer, the augments and the moderate. The reducer tends to decrease that which is perceived, the augments to increase and the moderate to do neither.<sup>3</sup> After studying patients for three years, Zborowski found that culture has an influence on responses to pain.<sup>4</sup> Blaylock seems to agree with Zborowski when he states in his article, "Psychological and Cultural Influences on the Reaction to Pain", that differences lie in the extent to which the individual has conditioned himself or has been conditioned to endure.<sup>5</sup> Kaufman concurs but links his findings to sex by suggesting that in some cultures it is not manly to be weak and sick and so men do not exhibit their feelings of pain.<sup>6</sup>

Other writers concern themselves with a description of pain, coping mechanisms of patients and management of pain. Crowley talks about pain as being cutaneous, deep and central.<sup>7</sup> The pain reaction

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<sup>3</sup>A. Petrie, Individuality in Pain and Suffering (Toronto: University of Toronto, 1967), p.2.

<sup>4</sup>Mark Zborowski, People in Pain (San Francisco: Jossey Bass Inc., 1969), p.19.

<sup>5</sup>J. Blaylock, "The Psychological and Cultural Influences on the Reaction to Pain", Nursing Forum, VII, (1968), 272.

<sup>6</sup>M.A. Kaufman, "Pain Wears Many Faces", A.J.N., LXI, (1961), 50.

<sup>7</sup>Dorothy Crowley, Pain and Its Alleviation (California: Regents of University of California, 1970), pp. 4, 33, 54-61.

threshold is lowered when the patient focuses his attention on the painful sensation and this threshold can be effectively raised if the individual is helped to alter the meaning which pain has for him. In the management of pain, she speaks about assessment and active intervention. She goes on to discuss what she terms "palliation", meaning the setting of priorities, knowing when pain is being aggravated without being told. Little things like positioning, backrub, etc. help to remove or minimize pain.

Bobey and Davidson, in their article, "Psychological Factors Affecting Pain Tolerance", say that anxiety is an integral factor in a person's perception and tolerance of pain.<sup>8</sup> Thus, when surgical patients are informed about their operation, that they should anticipate pain postoperatively and instructed how to cope with it, they don't need a lot of supportive narcotic medication. They also recover quickly. Those writers who believe that responses to pain are culturally determined, like Zborowski, do not accept this anticipation theory in its entirety. Zborowski says, "Anticipation allows man to prepare for pain, but it doesn't mean that it is automatically accepted."<sup>9</sup> It can be seen that all the writers mentioned so far have provided information which can be used to improve patient care.

Ujhely has written two books in which she describes the factors which affect nurses' responses to patients' pain. In her first book, she says that her own ethnic background affects the nurse's reaction to

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<sup>8</sup> M.J. Bobey and P.O. Davidson, "Factors Affecting Pain Tolerance", Jrn. of Psychosomatic Research, XIV, (Dec. 1970), 371-376.

<sup>9</sup> Zborowski, Op. Cit., pp. 29-30.

patients who have pain and who are of different background.<sup>10</sup>

Orlando has the same ideas when she says that what the nurse perceives, thinks and feels about the behaviour of the patient will, of course, reflect her individuality and will have more or less automatic consequences.<sup>11</sup> In Ujhely's second book, she discusses the unrealistic expectation that the nurse may have for her patients. She uses as an example the American nurse in the American culture where it is accepted to "keep smiling" no matter what and to "grin and bear" one's affliction or pain. In this setting, the nurse regards a patient ridiculous if he keeps ringing the bell and asking for narcotics instead of gritting his teeth until he is asked whether he is in pain. The nurse will react as anybody who expects one thing but finds something else happening instead. She may feel her authority is being challenged and will respond with anxiety. She may divorce herself of the patient's behaviour, shrug it off and give or attach a label to the patient as being difficult, demanding or a chronic complainer: "... don't pay any attention to him."<sup>12</sup> Another way of coping with the situation may be to be angry and impatient with the patient. Strauss and Glaser, writing on a nurse's reaction to a patient who cried in pain, say, she became aggressive and told the patient, "Look, crying just doesn't help you, so stop it."<sup>13</sup>

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<sup>10</sup>G.B. Ujhely, Determinants of the Nurse-Patient Relationship (New York: Springer Publishing Company, 1968), p.9.

<sup>11</sup>Ida J. Orlando, The Dynamic Nurse-Patient Relationship (New York: G.P. Putnam's Sons, 1961), p.40.

<sup>12</sup>G.B. Ujhely, The Nurse And Her Problem Patients (New York: Springer, 1963), pp.17-18.

<sup>13</sup>A. Strauss and G.B. Glaser, Anguish - A Case History of A Dying Trajectory (California: The Sociology Press, 1970), p.57.

Background to Particular Problem

The whole notion of pain has always been of great interest to the investigator, especially in patients who have had surgery. It appears they are in so much pain postoperatively and yet within ten days most of them leave hospital depending of course on the type of surgery and the rate of recovery.

Sometime last year the investigator nursed a lady with a brain tumour. This patient wrote a note to the nursing staff just before she had surgery saying that she hated pain. At the time the investigator wondered how this patient was going to cope with the pain which she was sure to have. During the time this patient was nursed, the investigator tried to fit her reactions into an understanding of how people cope with pain.

Another patient had asked for medication before getting out of bed. He said he had a lot of pain the previous day when he was out of bed. Did he exhibit any indicators of pain which escaped the nursing staff? The experiences with these two patients made the investigator feel that it was high time more was studied about pain after surgery, how it changes over time and how patients cope with it.

Examination of the vast literature on pain did not yield any detailed studies about how patients gave evidence of their pain, how nurses respond to such indicators and the outcomes that result from such responses. The only study that comes close to this idea was not done in the empirical situation, that is, in the clinical field while nurses nursed patients in pain. The study concerned itself with how inferences are made about the physical pain and psychological distress experienced by patients as these relate to verbal and non-verbal patient communication.

The respondents comprised 25 nurses, 25 social workers and 24 physicians who were asked to infer the degree of physical pain and psychological distress experienced by the patient. The instrument used comprised sixteen vignettes (a total of 32 items). The vignettes were prepared by experienced nurses. Each specific patient appeared in two different situations. In the first situation the patient verbalized discomfort and pain, and in the second situation the patient's distress and pain were not verbalized but expressed through action. The various items were distributed in a questionnaire randomly. An example was given of a 15 year old girl who was admitted to hospital for taking forty tablets of Aspirin. In the first situation she cried out that she wanted to die and in the second situation she bit her lip and turned away when the doctor tried to talk to her. The results showed that the three groups differ significantly in the degree of pain inferred, with social workers inferring the greatest pain and nurses and doctors inferring the least pain. All the groups inferred greater pain for verbal items. In the discussion the writers wonder whether the constant patient contact blinds nurses and doctors to patients' pain and if a protective shell is built around themselves, so that they will not be bombarded by patients' pain. It is suggested that perhaps familiarity makes them ignore it, or it is perceived as something routine, to be expected.<sup>14</sup>

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<sup>14</sup>E. Baer, L.J. Davitz and R. Leib, "Inferences of Physical Pain and Psychological Distress - In Relation to Verbal and Non-Verbal Communication", Nursing Research, XIX, (Sept. - Oct., 1970), 382-92.

While not providing data with which to answer such questions, this study does present information about the behaviours of a group of patients who appeared to be in pain that we might better understand how pain is exhibited, how nurses typically respond to patients in pain and what kinds of nursing seem helpful.

Since pain is a subjective feeling and not possible to observe directly, it became necessary first of all to identify what is pain, in other words, what behaviours are indicative of pain, before patients' coping mechanisms could be studied. It was also necessary to limit the study to a small group because the investigator was working alone within a limited time. Patients who had had major abdominal surgery were chosen because the investigator knew that these patients were likely to exhibit indicators of pain at the time she wanted to observe them. By major abdominal surgery, the investigator was referring to surgery which involved opening of the abdominal cavity but excluding straight-forward appendectomy and repair of inguinal hernia. These conditions were excluded because they were not likely to give rise to pain on the third and fourth day after surgery when observations would be made. It is known, and also a recent study on the circumstances in which post-operative patients and their nurses determine need for an analgesic states, that patients receive frequent doses of analgesics the first two days after surgery.<sup>15</sup> As such, the first two days were excluded since the patients, having been sedated, may not have experienced pain for long periods of time.

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<sup>15</sup>M.I. Macdonald, "The Circumstances in which Postoperative Patients and Their Nurses Determine Need for An Analgesic" (Unpublished Manuscript, McGill University, 1971), pp.42-43.

In this study, pain refers to hurt felt by the patients concerned.<sup>16</sup> The investigator did not have any formed hypothesis in mind, but there were certain pertinent questions to which she sought answers:

1. How much pain do these people have?
2. What indicators are there that they have pain?
3. What do they do about their pain?
4. How do nurses respond to patients' pain?
5. What are the important variables in understanding variation in each of 1,2,3 and 4?
6. What are the outcomes of nurses' responses?

The method used in collecting the data was that of participant observation.

There were no real difficulties in collecting the data except the continuous explanation to nurses and patients about the project. The data indicated that the patients exhibited their pain either by visual or auditory means. Patterns isolated were; from exhibiting visual indicators of pain to exhibiting auditory indicators of pain and exhibiting only visual indicators of pain. These were affected by the patient's age, type of surgery, time lapse after surgery and previous surgery experience. When nurses responded they promised to give medication, gave medication or gave advice to the patients. Patterns of nurses' responses identified were; responding to auditory indicators, responding to some visual indicators and not responding at all (which was most frequent).

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<sup>16</sup>Petrie, Op. Cit., p.2.

It is suggested that some behavioural indicators are associated with a high degree of pain and others with a low degree of pain. Their respective frequencies of occurrence was affected by the time lapse after surgery and the type of surgery.

Four types of outcomes followed the previously mentioned behaviours of patients: disappearance of the pain indicators, indicators of a high degree of pain were predominant and remained, indicators of a high degree of pain were predominant, but changed to a predominance of indicators of a low degree of pain, and indicators of a low degree of pain were predominant and remained.

This study, therefore, examines the behaviours of patients which appeared to be related to pain on the third and fourth days after major abdominal surgery and nurses' responses to such behaviours.

## CHAPTER II

## DESIGN

Introduction

This is a descriptive study, because its main purpose is to portray an accurate and systematic description of what is ... A descriptive study, according to Lastrucci, basically answers the question of who, what, where and how much.<sup>17</sup> This study investigated behaviours of patients which appeared to be related to pain on the third and fourth day after major abdominal surgery, how nurses responded to such behaviours and what outcomes resulted. In order to study these behaviours, it was necessary to investigate exactly what happened when nurses nursed these patients as well as how patients behaved at other times. This was a stage of discovery. Few, if any nursing theories have been developed to serve as a basis for nursing practice. As a beginning, some generalizations can be made towards the formation of theories from observations of actual nursing practices. Glaser and Strauss refer to this approach as, "the discovery of theory from data systematically obtained from ... research".<sup>18</sup> This discovery of theory was contrasted with verification of theory. Verification either supports or rejects hypotheses which

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<sup>17</sup>Carlo L. Lastrucci, The Scientific Approach. Basic Principles of the Scientific Method. (Cambridge: Schenkman Publishing Company, Inc., 1963), pp. 106-107.

<sup>18</sup>Barney G. Glaser and Anselm L. Strauss, The Discovery of Grounded Theory: Strategies for Qualitative Research. (Chicago: Aldine Publishing Company, 1970), p. 2.

have been theoretically formulated. In other words, verificational research starts with theory and tests it out in the real world. In nursing, because of the dearth of nursing theory, the discovery of theory is necessary and this must be grounded in empirical practice. It consists of making plausible interpretations from the data and building these into theory. If nursing is at the stage of generalizations, then we need to draw out of empirical situations, properties and categories of nursing practice which lead to generalizations and finally to theories. Isolation of these properties would be very meaningful to nurse practitioners with regard to their practice, so that we may come to know "what is", what is helpful to patients and what outcomes may be predicted from certain nursing behaviours. Accumulation of knowledge from description of what happens in the milieu of patient care leads to the formation of a theory. Glaser and Strauss suggest that such:

generation of theory should aim at achieving much diversity in emergent categories, synthesized at as many levels of conceptual and hypothetical generalizations as possible.<sup>19</sup>

This study has not generated a theory from an empirical situation, but it is a step towards establishing categories of generalizations.

#### Setting

The data for this study were collected in a semi-private thirty-six bedded surgical ward in a large hospital in the City of Montreal.

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<sup>19</sup>Ibid., p.37

Arrangements to enter the field were made by a faculty member. The investigator had told the head nurse the previous year that she might come back to her ward this year.

### Sample Selection

The patient sample was selected from a population which met certain criteria. The first of these was that the patient had had major abdominal surgery. Major abdominal surgery, as defined in the introduction, refers to surgery involving opening of the abdominal cavity, but excluding straightforward appendectomy and repair of inguinal hernia. Secondly, the person was situated on the selected ward. Thirdly, it should also be possible for the investigator to observe that person both on the third and fourth day. That is, that her class schedule would permit observations at these times. All patients meeting these criteria during the period of data collection were included. The following sample resulted:

1. Sample number :40
2. Age range of sample:17-86 years
3. Male: 8, Females :32
4. a) Sample number in single-bed rooms: 4 (male, 3 female)
- b) Sample number in two-bed rooms : 2 (male)
- c) Sample number in four-bed rooms : 34

Nurse Sample: included all those who nursed the patients selected.

### Number of Observations

Eighty observations were made; each observation lasted a minimum period of one hour.

### Data Collection

Once in the field, the investigator explained the project to the head nurse, that patients would be observed on the third and fourth days after major abdominal surgery. It meant that the investigator would be

on the ward more often than last year and at different times of the day, that is, not only in the mornings as was done last year. It was also explained that while the focus of the project might change any time, the general area of observation would not and therefore the investigator only wished she could come and go as she liked and collect the necessary information for herself alone. Further, the head nurse was asked to inform her staff of the investigator's presence to carry out the project. The investigator chose to give patients the necessary explanation herself. The head nurse was very sweet and understanding as usual. She agreed that the investigator could do exactly what she wanted and she would inform her staff.

The investigator dressed the same as she did last year in her white uniform. An attempt was made to talk to the patients before surgery where possible. If they were not seen before surgery, then they were seen before the third day after surgery. Seeing the patient before the third day helped the investigator to know the type of person she was going to deal with and whether to take or not to take notes. Unfortunately, this was not always possible, because some of the patients came in as emergencies, or at a time when the investigator was not on the ward. Two of the patients were asleep when the investigator was on the ward on the day of surgery and so she did not have the opportunity of talking to them.

The investigator told the patients that she was a graduate student in McGill University and that she was observing nursing practice.

Participant observation was used in collecting the data. Participant observation refers to the investigator's participation in the daily life of the people being studied. Becker and Geer say that this can be done overtly or covertly.<sup>20</sup> In this study, participant observation was done overtly with emphasis on observation. The decision as to which technique to use depends on the subject under study. Olsen and Whittaker state that, "... the method used depends on the subject matter."<sup>21</sup> If non-verbal behaviours were going to be observed as part of the study, then observation was the only method that could be employed profitably. Observation here refers to, "the act of obtaining data by looking at and listening to social conduct or by examining objects of physical traces."<sup>22</sup>

The investigator had the laborious work of explaining everything to nurses as the shifts changed and especially as new nurses came on the ward. The interesting part was that those who had had an explanation forgot themselves and asked who was being observed or which room the investigator was going to be in. A good rapport had been established between the investigator and the nurses and when confronted in front of patients like this, the answer was, "I am observing everybody, including you." The nurses usually laughed at this.

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<sup>20</sup>W. Filstead, Qualitative Methodology (Chicago: Markham, 1971), p.133.

<sup>21</sup>v. Olsen and E. Whittaker, The Silent Dialogue (San Francisco: Jossey Bass Inc., 1968), p.20.

<sup>22</sup>Ibid

The "floats" used to look at the investigator with inquiring eyes. If it was in the middle of an observation, their look was ignored; but an explanation was given afterwards. The first time the investigator went to the ward in the evening, she met the nurse in-charge at the nurses' station and the nurse asked, "Do you work in the evenings too?" An affirmative answer was given with the emphasis that it was more so on Tuesdays and Thursdays. She readily understood and left for supper.

In the beginning the patients accepted the investigator without too much questioning. As time went on, some of them did not accept the simple explanation; for example, they wanted to know why the investigator sat in a particular room at a particular time. Further explanation was given that all the rooms were being covered, but it was impossible to do them all at the same time.

Sometimes the investigator had a book and pretended to be writing notes from it because some of the patients looked suspicious when the investigator wrote without having looked at anything. At other times, nothing was written in the room. A complete documentation of the observations occurred immediately after the observation period. Sometimes patients tried to engage the investigator in conversation. This occurred mostly with patients who were not being observed. The investigator told them she was busy with her studies or just made sounds like, "Mmm" and they realized the lack of interest on the part of the investigator and stopped talking.

The investigator ended up by being given a few roles both by nurses and patients. Some of the roles assigned to the investigator

were, a student from Vanier College, a supervisor, a manager and a spy. It was not funny when a patient's relative came into the room where the investigator was observing and said, "Oh, she is the spy." She asked the patients to be of good behaviour because the spy was going to write down all the bad things they would do. Her mother explained that nothing had been written, but she said that they would be written later away from the room. The investigator, in her embarrassment managed to say, "if I write anything at all, it will only be the good things." They laughed and that ended the spying episode.

Patients who had already been observed were hurt when the investigator did not talk to them on subsequent visits to the ward. They used to take a lot of the investigator's time asking for explanations. The investigator told them they would be seen after she had completed her work at each visit. It was realized that by so doing, time was saved, because the investigator controlled the situation.

There were a couple of times when nurses wished the investigator good luck and asked about the data being collected. The investigator acknowledged appreciation for their concern, but explained that the data were not yet organized for discussion and they would not be until the spring. They understood and did not ask again.

Observations were made during the day and evening shift depending on the investigator's lecture times at the university. It was thought unnecessary to do observations late in the evening and at night because the patients usually received analgesics and tended to be comfortable and sleepy. It was decided that observations would not be made on patients

who had had analgesics less than three to four hours before arrival on the scene because they would be sleeping and would exhibit few indicators of pain. However, there was one instance in which an observation was made two and half hours after the administration of an analgesic because it was dinner time and the patient was talking to the next patient and exhibiting pain. It was also decided that observations would be made if the patients received analgesics just before or during the course of the observation until the patient slept or the observation came to an end. If the analgesic was given just before the completion of an observation and the patient was not sleeping, observation continued for a minimum of an extra twenty minutes.

Each patient was observed on each of the third and fourth days after surgery for a minimum period of one hour at each observation unless the patient received analgesic during the time and was sleeping. Observation also continued for more than one hour if analgesic was given just before the completion of an observation. If the patient was talking or receiving treatment from doctors, nurses or any member of the paramedical team, observation continued for more than one hour.

The investigator accepted the fact that data collection by observation may result in reporting observations tinged by the investigator's biases. Biases arise from prejudgement as a result of one's beliefs based on previous experiences. It has been said that people perceive what they want to perceive and that no human perception is wholly without bias. Kaplan has this to say about perception, "... that no human perception is immaculate, certainly no perception of any

significance for science."<sup>23</sup>

It has been suggested by some writers that in controlling biases in search of validity, observations can be carried out by two or more people at the same time. This was actually done in five instances in this study when observations were carried out with a member of faculty. There was a high degree of agreement in these observations. It was not possible to have this done oftener because the faculty member had teaching assignments at certain times when observations were being made. The investigator's colleagues too were usually busy with their own observations at the time when it was convenient for the investigator to do her observations. Another important point was that with some patients the investigator felt that it was better with only one person observing than two people, because the patients might be more disturbed and, therefore, their behaviours be affected and so the faculty member was asked to stay away.

Behaviours of patients which appeared to be related to pain on the third and fourth days after major abdominal surgery and nurses' responses to these behaviours comprised the data. The behaviours were conceptualized as indicators of pain. The unit of analysis, therefore, was essentially a piece of observable behaviour which comprised such an episode.

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<sup>23</sup>Abraham Kaplan, The Conduct of Inquiry (San Francisco: Chandler Publishing Company, 1964), p. 131.

Number of behaviours: 292.

The data analysis was concurrent with data collection. It was an ongoing process which guided the investigator to identify areas which needed further data. That is, data collection depended on data analysis of previous observations. The presentation of the analysis is in narrative form. The analysis sought patterns among the behavioural indicators of pain and subsequent nursing responses.

Patients' behaviours with respect to pain varied and the investigator was interested in identifying factors associated with these variations. She tried to see whether the age, sex, type of room, previous surgery experience, time lapse after surgery and the presence of visitors affected the behaviours with respect to pain.

An episode had a multi-categorization, that is, where more than one indicator of pain occurred together, each was categorized. Patients' behaviours which reflected the presence of pain fell into two main categories. These were visual and auditory indicators of pain. The visual indicators could be primarily seen by others and auditory indicators could be primarily heard by others. Several categories emerged out of these two main categories.

I. Indicators of Pain which were Primarily Visual

A. Facial Expression

This refers to manifestation of feeling on the face. Under this category, nine subcategories were isolated:

i. Grimacing: Grimacing is defined as distorting one's face, in other words, making faces. Byers says that facial expression may be an indicator of pain, even if the patient appears to

be sleeping. "He may be wearing a grimace which reveals tension in his face."<sup>24</sup>

- ii. Drawn face.
- iii. Frowning: refers to contracting the brow as in displeasure.
- iv. Clenching the teeth: the teeth are firmly pressed together, that is, upper and lower teeth.
- v. Biting the lips.
- vi. Wincing: it is the drawing back or contracting the eyes in an attempt to avoid pain.
- vii. Mouthing: this is a silent movement of the lips.
- viii. Pallor.
- ix. Perspiration.

B. Gestures

Refer to movement of the head and hands.

- i. Stroking the face: this gesture could only be associated with pain because it was done in conjunction with other indicators of pain; for example, grimacing which has already been identified as one of the true indicators of pain.
- ii. Hand movements around the eyes: these gestures were either closing and opening of the eyes, dabbing or rubbing the eyes. There were other indicators of pain at the same time; for example, grimacing, moaning and groaning.

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<sup>24</sup>V.B. Byers, Nursing Observation (Iowa: Wm. C. Brown Company, 1968), p.41.

iii. Hand movements around the abdomen. These gestures were in eight different patterns: both hands were placed on the abdomen, one on either side; one hand was put in the other and the abdomen supported from below; one hand was put in the other and placed on the abdomen slightly above the umbilicus; fingers of both hands were interlocked and placed on the abdomen; one hand was placed on the lower abdomen and the other hand above the umbilicus; only one hand was placed on the abdomen above the umbilicus; a pillow was put on top of the abdomen; palpating the abdomen and rubbing the abdomen with one hand.

iv. Running fingers through the hair: this was done frequently in conjunction with other indicators of pain.

v. Shaking the head: this gesture, like the others described, occurred in conjunction with other indicators.

vi. Pressing the forehead: again this gesture was not done in isolation.

### C. Generalized Movement

This refers to movement, including the trunk and most parts of the body. Six different patterns of movements were identified.

i. Non-movement: Patients who showed this indicator of pain, lay still in bed. It is considered as an indicator of pain, because it was shown in conjunction with other documented indicators of pain. Smith and Gips also have stated that movement usually increases pain and so the patient tries to remain as still

as he can.<sup>25</sup>

Example: Mrs. O. lay in bed so still that in the beginning the investigator thought that she was sleeping, but later she cried in pain.

ii. Walking: it is true that all patients are expected and encouraged to walk, but some of the patients did this to the extreme.

iii. Restlessness: Shafer and Others say that the patient who tosses about is frequently in pain.<sup>26</sup>

iv. Gulping: it is the act of swallowing quickly or greedily.

v. Taking in deep breaths.

vi. Rocking the body: this refers to swinging the body from side to side.

## II. Indicators of Pain which were Primarily Auditory

### A. Moaning and Groaning

Moaning is a low prolonged sound indicative of pain, or wailing audibly. Groaning is a deep usually inarticulate and involuntary often strangled sound with the eyes wide luminous and cheeks flushed. Moaning and groaning usually go together as was found in the data.

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<sup>25</sup>D. Smith and C. Gips, The Adult Patient (Philadelphia: J.B. Lippincott, 1963), p. 121.

<sup>26</sup>Shafer, K.N. et.al., Medical Surgical Nursing (St. Louis: C.V. Mosby, 1961), p. 72.

B. Craving

Webster's definition applies here: it is a loud vehement utterance of sound expressing strong or sudden emotion; for example: cries of pain.

C. Complaining of Pain

The patients expressed their feelings either to the investigator, a nurse or a member of the medical profession, another patient or a relative.

i. To the investigator: these complaints were made either on the third or fourth day, but mostly on the third day.

Example: Mrs. T.: "This thing hurts, eh?" (Pointing at her abdomen).

ii. To a nurse or member of the medical profession.

Example: Nurse: "How are you, Mrs. H?"  
Mrs. H.: "Oh, I am in pain."

iii. To another patient: Mrs. P. was walking along the corridor with another patient and she was stepping very lightly on the floor.

Example: Other patient: "Are you all right?"  
Mrs. P. : "My wound is so sore ..."

iv. To a relative: these complaints were made on the telephone and at visiting time.

Example: Mrs. M.: (to her daughter), "This thing hurts a great deal ..."

D. Asking for Medication

The request for medication was made by three channels, by the call light, asking the medicines-nurse on her usual rounds and asking other nurses in the room.

i. By the call light: on the fourth day Mrs. S. used this means when she was having pains and received medication.

ii. Asking the medicines-nurse on her usual rounds.

Example: The nurse came in to give Mrs. S. an injection and

Mrs. S. asked: "Is this for pain?"

Nurse: "No. Do you want something for pain?"

Mrs. S: "Yes".

Nurse: "I shall bring it later."

iii. Asking a nurse in the room:

Example: Mrs. F: "Please get me something for pain, please."

Nurse : "O.K."

E. Rationalization of Pain

The patients gave reasons for their pain in comparison to previous surgery, or as something to be expected.

F. Talking to Oneself

The patients mumbled to themselves. The investigator had the impression that they wanted to convey their feelings to the nurses, but they could not speak English.

Example: On the third day after subtotal colectomy, Mrs. B., a French speaking woman, sat in a chair and mumbled to herself. When the nurse came close to her, she mumbled again looking at the nurse. She was wearing a grimace. The nurse gazed at the wall and said, "I don't understand her." She then left the room.

Further analysis using the works of MacBryde, Smith and Gips, Shafer and Others, in support of the investigator's and other nurses' experiences helped to evolve another way of looking at pain. This was in relation to the amount of pain the observed patients were having, that is in terms of severity; were the behaviours indicative of a high or a low degree of pain? MacBryde says,

... The facial expression of true pain ... the pinched features, the pallor, the clammy skin, the dilated pupils, the knotted brow ... cannot be imitated by the malingerer. These, with intermittent involuntary cry or groan and the characteristic writhing or bodily contortions present an unmistakable picture of suffering.<sup>27</sup>

According to Smith and Gips,

The patient who doesn't complain shows discomfort by other means. He may curl up in bed or assume an abnormal posture, such as kneeling or toss about ... he may perspire ... facial expression of your patients, those in pain will look tense, with taut muscles, clenched teeth and a drawn face expression is often revealing.<sup>28</sup>

Shafer and Others say that,

Pinched faces, drawn and wrinkled brows, clenched and tightened fists may indicate severe pain. Profuse diaphoresis and a rapid pulse are also valuable clues. The patient who is curled up in bed, or who tosses about frequently is often in pain.<sup>29</sup>

(The emphasis is the investigator's)

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<sup>27</sup>C.M. MacBryde, Signs and Symptoms (Philadelphia: J.B. Lippincott Company, 1957), p. 54.

<sup>28</sup>Smith and Gips, Op. Cit., p. 120.

<sup>29</sup>Shafer, et.al., Op. Cit.

Those indicators described by the writers mentioned above and observed by the investigator were classified as indicators of a high degree of pain. These were: grimacing, drawn face, frowning, clenched teeth, pallor, perspiration, restlessness, non-movement, moaning and groaning and patients' complaints of pain. All other indicators observed, for example, walking, shaking the head and rationalization of pain were categorized as a low degree of pain. Since most of the indicators occurred together, another criterion was necessary for categorization. It was decided that if there were two or more of either high or low indicators within an observation, it was categorized as such, therefore, either predominantly high or low.

The existence of a high degree of pain or conversely of a low degree of pain will be related to the time lapse after surgery and the type of surgery in the following manner:

THE RELATIONSHIP BETWEEN TIME LAPSE, TYPE OF SURGERY  
AND THE INCIDENCE OF INDICATORS OF A HIGH OR LOW  
DEGREE OF PAIN

	Number of Indicators of High Degree of Pain	Number of Indicators of a Low Degree of Pain	Total
Postoperative Day a) 3rd b) 4th			
Type of Surgery a) Complicated b) Non-complicated			

Complicated surgery refers to surgery which involves a lot of handling of the internal organs.

Simultaneous occurrences of indicators of a high and low degree of pain will be shown as follows:

EXTENT TO WHICH INDICATORS OCCURRED IN AN  
OBSERVATION ACCORDING TO DEGREE OF PAIN REVEALED

	Degree of Pain				
	Number of Cases				
Number of Indicators Occurring Together	High Pain Indicators Only	Mixed High and Low Pain Indicators	Low Pain Indicators Only	Total Number of Cases	Total Number of Indicators

Three categories were identified from nurses' responses:

1. Promise to Give Medication

Nurses promised to give patients medications for their pain, but these were not given during the period of observation.

Example: Nurse: "Are you having pains, Mrs. V?"  
Mrs. V: "Yes".  
Nurse: "I'll see if I can get her to give you something for pain."

Mrs. V. was moaning and groaning at the time. The nurse was referring to the medicines<sup>nurse</sup> when she said, "... I can get her ...". The time was 2.05 p.m. The promised medication didn't come and the observation ended at 2.20 p.m.

2. Giving Medication

Medication was given to the patients.

3. Giving Advice

Advice was given to patients with a view to alleviating their pain.

The category system vis-a-vis patients' behaviours and nurses' responses as they appear in the data was checked by another person for consistency, as Lastrucci says, "The reliability of an instrument is when it gives consistent results under comparable conditions."<sup>30</sup>

A description of the extent to which these categories occurred, the patterns that emerged and the outcomes are included in the findings.

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<sup>30</sup>Lastrucci, Op. Cit., pp. 80-82

## CHAPTER III

## FINDINGS

The findings will be presented in four main parts: the frequency of each of the patients' behaviours which were referred to as visual and auditory indicators of pain, nurses' responses, frequency of patients' behaviours conceptualized as indicators of high or low degrees of pain, and finally the patients' behaviours which followed the already identified behaviours and classified as outcomes.

Patients' behaviours fell into two main categories:

I. Indicators of Pain which were Primarily Visual

The indicators in this group totalled two hundred and thirty-four (234) on the third and fourth days postoperatively.

II. Indicators of Pain which were Primarily Auditory

There were fifty-eight (58) such indicators. In each of these two categories, more than one subcategory emerged.

I. Indicators of Pain which were Primarily Visual

Three main categories constituted the visual indicators and more than one subcategory emerged in each of these three categories.

A. Facial Expression

Nine subcategories were isolated.

i. Grimacing: Forty-six instances of grimacing were isolated.

ii. Drawn face: Six instances were observed.

- iii. Frowning: There were twenty-seven incidents of this category.
- iv. Clenching the teeth: There were four instances.
- v. Biting the lips: This occurred eleven times.
- vi. Mouthing: Mouthing occurred four times during the period of observation.
- vii. Wincing: There were ten occurrences in the data.
- viii. Pallor: There were only two instances of this subcategory.
- ix. Perspiration: Two instances of perspiration were identified.

#### B. Gestures

These will be discussed under six headings:

- i. Stroking the face: occurred twice.
- ii. Hand movements around the eyes: there were sixteen instances and about half of them received medication for pain.
- iii. Hand movements around the abdomen: there were sixty-one occurrences in different patterns.
- iv. Running fingers through the hair: four instances were observed.
- v. Shaking the head: there were six of such gestures.
- vi. Pressing the forehead: seven instances were observed.

#### C. Generalized Movement

Six different patterns of movement were identified:

- i. Non-movement: there were eight instances of this subcategory.
- ii. Walking: there were three occurrences.

iii. Restlessness: Two instances of restlessness were observed.

Example: Mrs. F. tossed her body about a lot before she asked for medication for pain.

iv. Gulping: It was employed by five patients.

v. Taking in deep breaths: there were four instances.

vi. Rocking the body: there were four occurrences.

## II. Indicators of Pain which were Primarily Auditory

### A. Moaning and Groaning

Twenty instances were observed.

### B. Crying

There were six instances of crying.

### C. Complaining of Pain

Most of the complaints were made to the investigator.

Twelve incidents occurred. There were only two instances in which these complaints were made to a nurse or member of the medical profession. It was observed, however, that patients readily admitted that they were having pains when they were asked by the nurse or a member of the medical staff. Six such admissions were observed.

Example: Intern: "Mrs. F., are you having pains?"  
Mrs. F.: "Yes"

Patients complained of pain either in response to questions asked by other patients or just in the form of making statements. There were two instances in each group. There were also four instances of complaints of pain by the patients to their relatives. Two of these were on the telephone and the remaining two at visiting time.

D. Asking for Medication

Five instances were observed. The call light was used on two occasions, the medicines-nurse was also asked on two occasions and a nurse in the room was asked once for medication.

E. Rationalization of Pain

The patients rationalized their pain in two main ways; in comparison to previous surgery and as something to be expected. Five instances were identified: two in comparison to previous surgery and three as something to be expected. Three ways were isolated under this category; in terms of type of surgery, time lapse after surgery and age.

a) In terms of the type of surgery:

Example: Mr. T.: "It hurts a great deal, but then it should be expected, being an abdominal surgery".

b) In terms of time lapse after surgery:

Example: Mrs. K.: "I have discomfort here (pointing at her abdomen), but it should be expected. Today is only the third day after my operation."

c) In terms of age:

Example: Mrs. P.: "It hurts more than the two Caesarean sections I had, but then I was younger."

F. Talking to Oneself

There were four instances.

Nurses' Responses

Nurses' active responses to the visual and auditory indicators of pain were found to be comparatively few.

1. Promise to Give Medication

There were two instances of this category where nurses promised to give patients medication for their pain, but they were not given during the period of observation.

2. Giving Medication

Twelve medications were given, seven by the nurses' initiative and five at the request of the patients. These medications were not necessarily analgesics, because injection Gravol and Saline were given in two instances. The doctor suspected that the patient for whom he ordered the saline had pain which was psychological and as such, only a placebo was given. Five out of the seven responses of nurses who used their own initiative were given to moaning and groaning and crying. Injection Demerol was usually given except in the two instances where Gravol or Saline was used and in a third instance, when plain Darvon tablets were given because the patient said that she could not "stick" the Demerol any longer.

3. Giving Advice

Advice given to patients dealt with fluid intake, deep breathing and taking things easy.

a) Fluid intake: A nursing assistant's response to Mrs. H. admitting that she was in pain was:

"O.K., try and use the Bennett inhaler. I must get you to drink more. You must drink more."

The nurse left the room. She came back eight minutes afterwards and checked Mrs. H's temperature, pulse, respiration and blood pressure. Nothing was said or done about the fluid intake again.

b) Deep breathing: a registered nurse advised Mr. C. to take in deep breaths when she noticed that he was pale, perspiring profusely and admitted that he was having pains.

c) To take things easy: Mrs. W. was asked to take things easy. This occurred when she was walking down the corridor with her body slightly bent forward, holding her abdomen with one hand and leaning on the investigator.

#### Patterns of Patients' Behaviours

##### 1. From Exhibiting Visual Indicators of Pain to Exhibiting Auditory Indicators of Pain

The patients started exhibiting visual indicators and these gave way to auditory indicators of pain. This pattern was found to be related to the age of the patient, type of surgery and time lapse after surgery.

There was the tendency for the younger person to use many auditory indicators once he passed to that stage; for example, they cried and only stopped after they had received a response from the nursing staff. There were only seven younger patients in the group studied and four of them cried. The very few times the call light was used to ask for medication they came from the younger persons. The younger person refers to ages between seventeen and thirty.

When this pattern occurred in the older person, it was mostly moaning and groaning and they did not ask for medication. When they complained of pain, it was usually to their relatives. They rationalized their pain, rather than complained. This pattern also occurred in eleven patients out of the fifteen who had a type of surgery which would involve a lot of handling of the internal organs. There were also nineteen instances of this pattern on the third day as against

eleven on the fourth day.

Example 1: Mrs. S., who was mentioned earlier was twenty-eight years old. At the beginning of the observation, she was sitting in a chair in a sliding position. Her left hand was on her abdomen. She winced, bit her lip and right thumb, pressed her forehead, took in deep breaths and clenched her teeth. She then started moaning and groaning and put on her call light. She walked slowly to the door, peeped into the corridor and turned to go back to the chair. She turned back on hearing some sounds in the corridor. It was an X-ray technician and so she turned again towards the chair. There were some sounds in the corridor again and she turned back towards the door. It was the orderly and so she turned back towards the chair and burst into tears. She sat in the chair still crying. Finally a nurse came in and Mrs. S. had medication for pain.

Example 2: Mrs. F., an eighty-three years old lady had a subtotal gastrectomy. On the third day she was very restless. She picked on the naso-gastric tube in her right nostril, picked up Kleenex tissue and cleaned her lips, tongue and nose with it. She tossed her body about wearing a grimace and then she started moaning and groaning loudly. She then said to the investigator, "I am in pain, pain, ooh! Please get me something for pain."

Example 3: On the third day after cholecystectomy, Mrs. O. rubbed her eyes, her face was drawn, she opened and closed her eyes. She placed a pillow on her abdomen and ended up crying. She put on her call light and told the investigator still crying,

"I cannot bear the pain any longer. I am going to yell any minute. The nurse gave me something for pain in the early hours of the morning. Please get them to do something."

On the fourth day, Mrs. O. was the first to say "hello" to the investigator and started cracking jokes.

Example 4: Mr. B. was another patient who went through this pattern on the third day after a hemicolectomy, but on the fourth day he waved his hand in the air and smiled as soon as the investigator showed her face at the door of the four-bed room. He couldn't communicate with the investigator, because he was French, but he asked, "French, no?"

## 2. Exhibiting Only Visual Indicators of Pain

This pattern was found to be related to the age of the patient, previous surgery experience and time lapse after surgery.

Patients above the age of thirty years were mostly found to show only visual indicators of pain.

Example: Mrs. M., an eighty-six years old lady had a cholecystectomy. On the third day, she wore a grimace, put her right hand on her abdomen and remained very still in bed. A registered nurse came in and said,

"The old lady is good, she does not complain of any pain. The other lady, although younger and had the same surgery, complained a lot. She even cried."

Mrs. M's daughter was sitting beside her in a chair. She smiled and nodded her head. Mrs. M. didn't say anything, but when the nurse left she told her daughter,

"This thing is giving me a lot of pain, but when you are older, you don't cry, you only grunt."

Patients who had had surgery before did not usually use auditory indicators. If they did at all, it was usually in relation to rationalization of their pain.

Example: Mrs. I. was found sitting in a chair knitting, she winced on and off. She stopped knitting and placed her left hand on her abdomen and said,

"This is nothing compared to the pain I had when I had hysterectomy."

It appeared that she was using her past surgery experience to help her bear her present pain.

Visual indicators only were mostly exhibited on the fourth day even with patients who had a type of surgery which would involve a lot of handling of the internal organs. An example has already been given of Mrs. O., who used visual through to auditory indicators on the third day, but on the fourth day, she exhibited only visual indicators; for example, frowning and holding the abdomen. She had a cholecystectomy. The second example given was Mr. B., who had the same pattern on the third day and only visual indicators on the fourth day. He had a hemicolectomy.

Visitors appeared to have an influence on patients' behaviours. Fifteen patients were observed in the evening. Nine of them had visitors with them. During that time, they talked and showed few visual indicators of pain, although for five of the patients, it was their third day after surgery.

### Patterns of Nurses' Responses

#### 1. Responding to Auditory Indicators

Auditory indicators preceded most of the active responses which came from the nursing staff and from people who were not nurses. In discussing these indicators earlier on in the chapter, it was shown that nurses responded in one way or the other to patients who complained of pain or asked for medication, or moaned and groaned and cried to their hearing. There was an instance when a physiotherapist told a patient who was moaning and groaning, "I'll get the nurses to give you something for pain." There was a nurse in the room earlier on when the patient was showing visual indicators of pain to which she did not respond. The patient started moaning and groaning when the nurse left the room.

#### 2. Responding to some Visual Indicators

Examples of such visual indicators are pallor, perspiration, walking with the investigator and holding the abdomen. When Mr. C. looked pale and perspired profusely and admitted that he was not feeling good, the nurse helped him back to bed and advised him to take in deep breaths.

Example 2: Mrs. W. was asked to take things easy when she walked down the corridor with the investigator holding her abdomen.

Example 3: Miss C. too admitted that she was in pain when she was walking down the corridor with the investigator holding on to her abdomen and later received injection Gravol.

### 3. Not Responding at all

In general, nurses did not respond to many of the indicators which were observed by the investigator. Most of these indicators were in the visual group; for example, grimacing, drawn face, biting of lips and non-movement. Perhaps a few figures may help explain the investigator's point.

Total number of indicators	: 292
Total number of visual indicators	: 234 or 80.14 percent of total indicators
Total number of auditory indicators	: 58 or 18.86 percent of total indicators
Total number of responses	: 17
Number of responses to auditory indicators	: 12 (28 indicators)
Number of responses to visual indicators	: 5 (21 indicators)

#### Indicators of a High and Low Degree of Pain

The data show that for the eighty observation periods, there were indicators of a high and low degree of pain in the following figures and proportions:

Indicators of a high degree of pain : 163 or 56 percent of total indicators

Indicators of a low degree of pain : 129 or 44 percent of total indicators

The time lapse after surgery and type of surgery were found to be factors which affected the indicators shown (see chart on page 42). There were more indicators of pain on the third than the fourth day and there were quite a number in the group of indicators of a high degree of pain. There were one hundred and seventy (170) indicators on the third day, 100 or 58.80 percent were indicators of a high degree of pain and 70 or 41.18 percent were indicators of a low degree of pain. There were 122 indicators on the fourth day, 63 or 51.64 percent comprised

indicators of a high degree of pain and 59 or 48.36 percent indicators of a low degree of pain. Of the total indicators, 129 were shown by patients who had complicated surgery, in other words, surgery which involved a lot of handling of the internal organs; and 77 of these indicators were of a high degree of pain. Therefore, 47.27 percent of the total indicators came from such patients, although there were only 15 of them out of the forty observed.

CHART 1

THE RELATIONSHIP BETWEEN TIME LAPSE, TYPE OF SURGERY AND  
THE INCIDENCE OF INDICATORS OF A HIGH OR LOW  
DEGREE OF PAIN

	Number of Indicators of a High Degree of Pain	Number of Indicators of a Low Degree of Pain	Total
Postoperative Day			
a) 3rd	100	70	170
b) 4th	63	59	122
Type of Surgery			
a) Complicated (15 Patients)	77	52	129
b) Non-Complicated (25 Patients)	86	77	163

The indicators occurred mostly in clusters as the following  
chart indicates:

CHART 2

EXTENT TO WHICH INDICATORS OCCURRED TOGETHER IN  
AN OBSERVATION ACCORDING TO DEGREE OF PAIN REVEALED

Degree of Pain					
Number of Cases					
Number of Indicators Occurring Together	High Pain Indicators only	Mixed High and Low Pain Indicators	Low Pain Indicators only	Total Number of Cases	Total Number of Indicators
10	..	1	..	1	10
9	..	1	..	1	9
8	..	2	..	2	16
7	..	1	..	1	7
6	..	6	..	6	36
5	..	8	..	8	40
4	..	13	3	16	64
3	..	17	2	20	60
2	1	19	5	25	50
TOTALS	2	68	10	80	292

The above chart shows that there was no case of one indicator appearing alone; therefore, the indicators cluster. One hundred and seventy-four (174) occurred in clusters of 2, 3 or 4 indicators. These three types of cluster were most frequent and comprised 61 cases out of 80. (Thus, 60 percent of the indicators occurred in 76 percent

of the cases for an average of just under 3 indicators per patient [2.85] while the remaining 24 percent of cases had an average of 6 indicators per patient.) Clearly then, some one quarter of the patients seemed either to have much more pain than the average, or they were more demonstrative behaviourally of the pain they had. Five patients had 7 or more indicators of pain in a single observation. There was, therefore, always more than one sign which revealed the subjective feeling of pain in each patient. Most cases consisted of a mixture of high and low pain indicators occurring together. The only variations in this pattern were for 2 cases of high pain indicators and 10 cases of low pain indicators distributed as shown on Chart 2.

Eleven instances received responses from nurses on the third day. These each comprised two or more indicators of a high degree of pain for a total of thirty-four such indicators. On the fourth day, six instances received responses from nurses, four comprising two or more indicators of a high degree of pain for a total of nine indicators of a high degree of pain. The remaining two instances were comprised of two or more indicators of a low degree of pain for a total of six indicators of a low degree of pain. Thus, it can be seen that when nurses respond, they primarily do so to those indicators which signify a high degree of pain, a finding which tends to substantiate our expectations and the validity of our arbitrary dichotomy of indicators into those which signify high or low pain.

Thirty-two patients out of the forty observed on the third day had two or more indicators of a high degree of pain. On the fourth day, eleven patients fit into this group. As previously noted, all patients gave evidence of having some pain, but it seemed to be considerably reduced on the fourth day. This is further borne out by the incidences of the patterns of outcomes to follow.

Four patterns of outcomes appeared to follow the behaviours which have been categorized and analysed.

1. Disappearance of the Pain Indicators

This outcome was identified as being present when the patient looked relaxed or slept. It only occurred following a nursing intervention. There were four such outcomes, three on the third day and one on the fourth day. In all four instances, the patients started off with some indicators of a high degree of pain. Three of them received medication and two of these patients looked relaxed twenty-five minutes after the administration of medication. The other patient slept and was snoring twenty minutes after the administration of analgesic. The fourth patient was advised to take in deep breaths and he looked relaxed fifteen minutes after the advice. Relaxation refers to diminution of tension in the patient's appearance.

2. Indicators of a High Degree of Pain were Predominant and Remained

There were thirty instances of this pattern, twenty-one on the third day and nine on the fourth day. It is evident from these figures that the pattern of outcome was more prevalent on the third than

the fourth day. Seven out of the nine on the fourth day came from patients who had surgery involving a lot of handling of internal organs; for example, cholecysto-jejunosomy enterostomy. There were five responses from nurses for these patients; one patient was advised to relax because she was "too nervous", another one was advised to drink more, two were promised medication and one received medication. The remaining twenty-five received no response.

3. Indicators of a High Degree of Pain were Predominant but changed to a Predominance of Indicators of a Low Degree of Pain

Nine patients showed this pattern, eight on the third day and one on the fourth day. Three of them received medication for pain, one received a placebo in the form of injection saline and the remaining five did not receive any nursing response. Two of these five patients exhibited indicators of a low degree of pain when they received visitors and they were talking to them.

4. Indicators of a Low Degree of Pain were Predominant and Remained

There were thirty-six instances; eight on the third day and twenty-eight on the fourth day. Thirty-five of these patients did not receive any nursing response. In one instance, the patient was asked by the nurse to take things easy.

The observation of one patient on the fourth day is not included in the findings on outcomes. She received news of the death of her mother and she wanted to be alone and so the curtains were pulled around her bed, because she was in a four-bed room. As such, the observation could not be done.

Nine out of the twelve responses initiated by nurses came from registered nurses.

## CHAPTER IV

## SUMMARY AND CONCLUSIONS

This study examined the behaviours of patients which appeared to be related to pain on the third and fourth day after major abdominal surgery. Certain behaviours were conceptualized as indicators of pain. These indicators were found to be either visual when they could be primarily seen by others and auditory when they could be primarily heard by others. There were 292 indicators identified, of which 234 were visual and 58 were auditory. Patterns that emerged were: from exhibiting visual indicators of pain to exhibiting auditory indicators of pain and exhibiting only visual indicators of pain. These indicators occurred in clusters and were multicategorized.

The pattern of exhibiting visual indicators to exhibiting auditory indicators of pain was found to be related to the patients' age, type of surgery and the time lapse after surgery. The younger patient used this pattern more than the older patient. Patients who had surgery involving a lot of handling of the internal organs were found to fit into this pattern to a greater extent than those who had less handling of internal organs. There were more instances of this pattern on the third day than the fourth day.

Exhibiting only visual indicators of pain was related to the age of the patient, previous surgery experience and time lapse after

surgery. The older patient above thirty years of age, usually showed only visual indicators. Patients who had had surgery before used visual indicators mostly. When they used auditory indicators, they were usually used to rationalize their pain. More visual indicators were shown on the fourth day than the third day and fewer visual indicators were shown when patients had their visitors with them.

When nurses responded to indicators of pain, they did so in one of three ways; promising to give medication, giving medication and giving advice. These responses formed three patterns when linked to the preceding patient behaviours; responding to auditory indicators, which received most of the responses, responding to some visual indicators and not responding at all which was most frequent. There were only 17 nurses' responses and twelve of them followed auditory indicators, while 5 followed only visual indicators of pain. In all, out of 292 indicators, 49 or 17 percent received responses.

It is suggested that some indicators are associated with a high degree of pain and others with a low degree of pain. The behaviours indicating high and low degrees of pain were found to be related to the time lapse after surgery and type of surgery. There were more indicators on the third day than the fourth day, 170 and 122 respectively. There were 100 indicators representing a high degree of pain on the third and 63 on the fourth day. The indicators of low degree of pain also diminished on the fourth day with 70 on the third day and 59 on the fourth.

The indicators also occurred in clusters with each cluster usually containing some which were associated with high pain and some

with low pain. One hundred and seventy-four (174) occurred in clusters of 2, 3 or 4 indicators. These were the most frequent cluster representing 61 cases out of 80. Sixty percent of the indicators, therefore, occurred in 76 percent of the cases, so that on the average, each patient showed three indicators of pain in one observation period. The remaining 24 percent of cases had an average of 6 indicators per patient, as such, one quarter of the patients seemed either to have much more pain than the average, or they were more demonstrative behaviourally of the pain they were having. Five patients had more than 7 indicators in a single observation. Most cases consisted of a mixture of high and low indicators occurring together. Variations noted in this pattern were for 2 cases of high pain indicators and 10 cases of low pain indicators to occur alone.

Eleven instances comprising 34 indicators of a high degree of pain received nursing responses on the third day.

On the fourth day, nine indicators of a high degree of pain and six of low degree of pain received nursing responses. Of the forty patients observed on the third day, thirty-two showed two or more indicators of a high degree of pain, but only eleven fit into the same group on the fourth day.

Four patterns of outcomes followed the behaviours which have been categorized and analysed. They were: disappearance of the pain indicators; where indicators of a high degree of pain predominated, they changed to behaviours indicative of a low degree of pain; or high pain indicators remained; and where indicators of a low degree of pain predominated, these remained.

Nurses' responses to the indicators of pain were comparatively few, irrespective of the fact that many of the indicators were auditory and representative of a high degree of pain. Generally, it appeared that the nurses did not pick up the cues which indicated that the patients were having pain, although the data showed that on the average, each patient showed three indicators of pain in an observation period.

The fact that most responses were given to auditory indicators gives the impression that because they can be heard, they can't be ignored and also they tend to represent a high degree of pain. The visual indicators can easily be ignored and they represent a low degree of pain. An example was given in the Findings Chapter of a nurse telling a patient that she was good because she did not complain of any pain. The patient was at the time wearing a grimace and holding her abdomen. The patient later said that she was in pain, but she was not going to cry at her age. The nurse's basis of a good patient, therefore, was somebody who didn't vocalize her feelings. There was another similar instance when a nurse told a patient that he was good when he walked into the room where the investigator was observing another patient. His body was bent forward. The nurse said, "You are good. You don't complain. If all patients would behave like this ..."

This statement implies an expectation of behaviour of all patients in the nurse's mind. If the quiet patient is the good patient, then such a situation will not enhance the nurse's visual perception which is of vital importance in the art of observation. The term "to be good" itself is relative and the investigator was doubtful as to what the nurses really meant.

The quality of some of the nurses' responses were ambiguous and questionable. The patient who was asked to take things easy had been advised to walk around and given a reason why that was necessary. When she was asked to take things easy, it sounded contradictory. How much was she expected to do? It was the first walk she was having down the corridor. At any rate, the term, "take it easy", which has become fashionable these days, is ambiguous to the investigator, especially in this particular instance.

Since most of the patients' complaints were made to the investigator, this suggests that patients would discuss how they feel with nurses if they find the environment conducive. As it was, the nurses might have appeared too busy to the patients and so they kept their feelings to themselves. The investigator received the complaints because she was seen as the only one there and relaxed. Orlando says that patients have an image of nurses as being too busy and so they don't want to disturb them. When they see nurses dashing around, they feel they should not add more trouble to the already burdened nurses.

They may try to bear their pain until the last minute with the hope that they would receive more attendance. Others may have had bitter experiences which make them skeptical of nurses in general.<sup>31</sup> On the other hand, some of the complaints received by the investigator might have been directed to a staff person in the investigator's absence. Thus, the very presence of the investigator could have biased the results obtained in this area.

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<sup>31</sup>Orlando, *Op. Cit.*, p. 26.

Patients' conversations that the investigator overheard support some of the arguments above. There was a patient standing in front of the bathroom door of the room in which the investigator was going to observe Mrs. N. The following is what happened when the patient saw the investigator:

Patient (A): "Maybe you can take over from me so that I can have my supper. It is getting cold. The nurse was busy and so she asked me to help Mrs. N. to the bathroom."

Investigator: "Sure. Enjoy your supper."

Mrs. N. called from the bathroom and the investigator helped her back to bed. She sat at the edge of the bed rocking her body. The investigator sat in a chair where she could observe Mrs. N.

Patient (A): "You must be very tired."

Investigator: "No. I ..." (She didn't allow the investigator to complete her sentence).

Patient (A): "Nobody sits down around here. They are always busy. You can hardly talk to them."

Mrs. N. : "It hurts a great deal. It was not too bad when I had the binder on."

Patient (A): "Ask them to put it back."

Mrs. N. : "No. Yesterday when I asked the nurse for help, she said I should help myself. I am not going to ask them for anything again."

Patient (B): "They didn't give me cream for my tea."

Patient (A): "You can have mine. I don't want it."

Patient (B): "Maybe I shouldn't have it."

Patient (A): "I'll go ask them."

Patient (B): "Please don't, they are busy."

Patient (A): "What are they here for, anyway."

The patient rushed into the corridor and immediately came back with a nurse who explained to the patient that she was not supposed to have cream.

The illustration given is indicative of the need to encourage patients to make their needs known. Just telling them to do so is not enough, because we know from experience that patients are often told but still they may feel they are being a nuisance. The nurse is, therefore, left with only the choice of being a skilled

observer in order to go out of her own way to help those patients in pain and to provide an atmosphere where patients feel free to reveal their feelings.

If the nurses noticed the indicators of pain and did nothing about them, would that mean that they could not decide when to intervene and what type of intervention to employ? It is true that the findings indicated that twelve of the nurses' responses given were in the form of giving injections, especially Demerol, but the investigator does not imply that every patient needed the same type of response. Maybe pain cannot be relieved by Demerol alone and that by assessing first and finding out more about patients' pain, we may come to realize that other measures may help in certain instances. An example has been given of Mr. C., who looked relaxed after he had been advised to take in deep breaths and put in a comfortable position in bed. In the beginning he was sitting in a chair and so the change in position might have been a factor in achieving such an outcome.

Of the twenty-one patients whose behaviours on the third day were indicative of a high degree of pain and did not receive any nursing response, nineteen of them continued to exhibit the same indicators during the observation periods. Some of them moaned and groaned and cried. The remaining two patients managed to pass from exhibiting indicators of a high degree of pain to exhibiting indicators of a low degree of pain. They were talking to other people at the time. On the fourth day, the behaviours of eleven patients were indicative of a high degree of pain and seven of them did not receive any nursing response. The seven patients continued to exhibit the same indicators and assumedly the pain sensations continued. The following examples are a further explanation to the

investigator's conclusions.

Example 1: Mrs. B. was lying on her back across the bed wearing a grimace. She looked up at the investigator and said, "Baby, pain." She had been calling the investigator, "Baby".

Investigator: "I am sorry."

She was biting her lip and moaning softly when a nurse came in to take the temperatures. Mrs. B. tried to turn herself on the side and suddenly made the sound, "Ooooh!" The nurse checked her temperature and went over to the other patients in the room. Mrs. B. started crying. The patients in the room looked anxious, especially the one in "D" bed. She looked across Mrs. B. in "B" bed. The nurse looked and asked,

"Any problems?"

"D" patient: "Me?" (Still looking at Mrs. B's direction).

Nurse : "Yes".

"D" patient: "No, no problems."

Nurse : "O.K." (She left the room).

Example 2: Mr. P. was sitting in a chair with his head slightly bent down. The Bennett respirator was standing in front of him. The machine was on, but he was not using it.

Investigator: "How are you, Mr. P? Have you finished with the machine?"

He looked up with a frown:

"No, I am tired." (He also shrugged his shoulders).

The investigator sat in a chair at the other side of the room. Mr. P. frowned deeply until his brow was knotted. He pushed the machine away from him and started moaning softly. A nurse walked in, put off the machine, checked the drip that was going into Mr. P's left arm and walked over to the investigator.

Nurse : "Hello, are you working hard?"

Investigator: "Always".

She smiled and left the room. Mr. P. was moaning and groaning loudly when the observation was completed ten minutes after the nurse's departure from the room.

The question still remains, did the nurse notice the behaviours indicative of pain? Was there nothing she could have done if she observed that the patient was in pain? She turned off the machine and checked the drip without a single word. Her conversation was directed to the investigator who did not need it, at least not at the time, for she was busy doing her observations.

It stands to reason, however, that before anything can be done for the patient, more information should be sought about his pain other than that he says, or it is noticed, he is in pain. Investigation of patients' pain was found lacking. An action was taken without apparent assessment and planning. It was also noticed that the nurses did not check the effectiveness of the actions they took. In other words, they did not evaluate their actions. In order to evaluate the effectiveness of an action, means the nurse needs to go back to the patient to see the results according to the patients' behaviours. This was not noticed being done and may be not usually done according to the following conversation in a four-bed room, whilst the investigator was observing Mrs. A. Mrs. A. was in "D" bed:

Patient (C): "There he goes again. It was the same last night."

Patient (B): "Wasn't that awful; I thought you were asleep. They gave Mrs. A. medication for her pain, but she couldn't sleep. They make us put out our lights at 9.30 p.m., but they don't do anything about the men. Sometimes they talk as they walk along the corridor."

This conversation came on when the patient across the corridor's television could be heard in the room.

Checking or evaluating the effectiveness of an action taken would help nurses to observe whether they have created the necessary environment for effective outcome.

The foregoing questions and discussion have implications for nurse educators and leaders. How is the nurse helped to master this all encompassing, all important skill of observation, and to maintain her mastery once it is acquired? The beginning student is to be helped to assess, plan, act and evaluate the effectiveness of her actions. As the nurse is helped with her observations, problems that are identified should be further explored for more data. The nurse should be helped to examine the "how" of situations. In this study, for example, how do the patients indicate their pain, what indicators are there to show that they are in pain, when do they show these indicators why do they behave the way they do and what do we do about them? All this is necessary because as Fisher and others say, observation is a problem-solving process and it is not complete until the nurse has defined, intervened and evaluated the information she collected.<sup>32</sup>

Nurses can be encouraged to put their observations on paper, so that they can look at them and seek for logical relationships, for as Byers says, "... the development of this skill is a long and arduous process of deliberate concentration of patients and the problems they present."<sup>33</sup> It is not spontaneous with mastery of academic clinical courses specified in the curriculum. In other words, the emphasis is

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<sup>32</sup>v. Fisher, et. al., Promotion of Physical Comfort (Iowa: Wm. C. Brown, 1970), p.16.

<sup>33</sup>Byers, Op. Cit., p.2

to be on continuous systematic looking, listening, assessing, planning, intervening and evaluation of one's actions.

Further research is recommended in relation to nurses' responses to patients in pain, probably including interviews, to identify their difficulties and the necessary action taken.

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