THE EXPERIENCE OF PAIN IN SURGICAL PATIENTS: A CROSS-CULTURAL STUDY

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ABSTRACT

The purpose of this study was to describe and compare the experience of pain in surgical patients from two cultural groups, and to identify similarities and differences in their conceptualizations of pain, and attitudes and behavioural responses to pain. An integral part of the study was to generate hypotheses and concepts which may contribute to the formulation of substantive theory in the area of care of patients in acute pain.

The design of the study was influenced by a qualitative approach to research, with the basic expectation that explanation would emerge from the data collected. The methodology used was that of supplemented participant-observation. Thirty three adults (20 Anglo-Australians and 13 Yugoslavs), admitted for abdominal surgery to one of three hospitals in Sydney and Wollongong, Australia, were observed throughout their period of hospitalization. In addition, non-structured interviews were conducted with each patient prior to surgery, and prior to discharge from hospital; verbal self-reports, visual analogue scales, and behavioural observation check lists were used; and information about peri-operative interventions (including analgesic drugs) was collected.

The findings relate primarily to:

(a) the experience of pain in terms of the intensity, duration, and quality of pain, and pain-related behaviours;

(b) the relief of pain in terms of the use and perceived effectiveness of analgesic drugs and other pain-relieving measures, with special reference to patient preferences for social company during the experience of pain; and

(c) the prospective and retrospective evaluation of the experience in terms of pre-operative fears, fulfilment of expectations, and positive and negative aspects of the experience.

The findings support the hypothesis that while some behavioural differences exist between Anglo-Australian and Yugoslav patients, the

greatest degree of difference between the two groups is found in their underlying attitudes to pain. In addition, a number of more specific conclusions are presented, followed by a discussion of implications for clinical practice and for further research.

ACKNOWLEDGEMENTS

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Irena Stadjar

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Chapter 1

INTRODUCTION

THE PROBLEM IN CONTEXT: NEED FOR THE STUDY

In spite of the universality of pain, the frequency with which it occurs, and considerable research undertaken over the past century, relatively little has been written or is known about certain aspects of pain. Melzack (1973) has suggested that pain is such a common experience that we seldom stop to define it in ordinary conversation. At the same time, researchers who have studied pain have been unable to produce a definition of pain that is universally acceptable. The problem of definition, as well as an inadequate explanation of why some people seem totally insensitive to pain while others experience severe pain in the absence of any apparent stimulation, make the problem of pain "one of the most puzzling and challenging problems in biology and medicine" (Melzack, 1973, 13).

Medical and related scientific enquiries have long focused on the neuro-physiological properties of pain. Orientation for such research has come from theories of pain which have dominated scientific thinking over the last one hundred years. Until the 1960's, and the emergence of the gate-control theory, the framework for pain investigation came from two groups of theories first proposed towards the end of the nineteenth century - the specificity theory, and the pattern theories. Because of their influence on pain research, and the explanations they offer of pain as both a complex experience and a difficult concept, all three theories are briefly examined at this stage.

The Specificity Theory

The specificity theory postulates that specific pain receptors exist in the skin as free nerve endings, and that these receptors generate pain impulses which are carried by A-delta (small-diameter,

myelinated) fibres by the spinothalamic tract in the spinal cord (Hedlin and Dostrovsky, 1979; Schmitt, 1977). While some impulses are relayed to the motor fibres of the reflex arc, other impulses cross over and ascend via the lateral spinothalamic tract to a pain centre in the thalamus where they arouse perception of pain. The cortex is then activated and provides interpretation of the pain in terms of intensity, location, and other qualities (Siegele, 1974).

According to this theory, analgesics act by depressing the central nervous system at the thalamus and cortical level, altering perception and interpretation of pain. The theory also provides the rationale for the surgical treatment of pain which involves severing of the nerve tracts in the anterior portion of the spinal cord (Drakontides, 1974).

The critics of the specificity theory generally accept that the concept of physiological specialization is the strong point of the theory (Brain, 1962; Melzack and Wall, 1975). The weakness of the theory is seen to be the psychological assumption entailed in terms such as "pain receptors" or "pain impulses" which imply a direct connection from the receptor to a brain centre where the pain is felt so that stimulation of the receptor must always elicit pain (which it does not), and only the sensation of pain (Melzack and Wall, 1975).

Brain (1962) suggests that it is scientifically untenable to speak of "pain impulses" or "pain conduction" since no single impulse along a particular pathway is a pain - the process is more complex. Put more simply, "pain is a state of mind and states of mind are not conducted along nerve fibres: they are the result of a complex interplay of nerve impulses which involve the activity of very large areas of the nervous system" (Brain, 1962, 7). In practical terms, the specificity theory fails to account for paradoxes such as phantom limb pain and persistence of pain after surgical intervention involving the severing of nerves, as well as for the effects of psychological or socio-cultural factors on the experience of pain (Melzack and Wall, 1975; Siegele, 1974).

Pattern Theories

Pattern theories incorporate the concept of intensity first proposed in 1894 by Goldscheider who suggested that stimulus intensity and central summation are the critical determinants of pain (Melzack and Wall, 1975). It was accepted by many researchers that pain could be produced by stimulation of any sensory nerve providing the strength of stimulation exceeded a certain level of intensity (Zotterman, 1962). In their newer versions, pattern theories such as that proposed by Noordenbos (1979) suggest that subjective pain is affected by patterns of impulses, stressing sensory interaction, and particularly the idea of the multi-synaptic afferent system in the spinal cord. The diffuse, extensive connections within this system may explain why at times pain may persist even after a spinothalamic cordotomy (Melzack, 1973).

In his definition of pain Noordenbos incorporates the concepts of patterning and intensity as well as individual factors when he suggests that "pain is an end-product. It arises as the result of cerebral integration of an afferent pattern, a pattern which exceeds acceptable limits and with which that particular individual is unable to cope" (Noordenbos, 1979, 318-319).

Like the specificity theory, pattern theories have made their contribution to the understanding of pain and to clinical practice, particularly in their emphasis on cerebral integration of stimulus patterns. Like the specificity theory, however, pattern theories cannot explain the failure of many pharmacological and surgical treatments for pain (Hardy et al, 1967; Melzack and Wall, 1975). Neither specificity nor pattern theories recognise the influence of socio-cultural factors in the perception of pain, although they recognise their role in the response to pain.

The Gate-Control Theory

First proposed in 1965 by Melzack and Wall, this is the most recent of the comprehensive theories of pain. It differs from other theories in that it proposes that nerve impulses associated with pain can be altered by the modulation of the membrane potentials of

the terminals for incoming fibres, thus controlling the intensity of sensory input from the peripheral nerves, the actual degree of control being determined by central control mechanisms (Siegele, 1974). The theory proposes the existence of three spinal cord systems: the cells of the substantia gelatinosa in the dorsal horn; the dorsal column fibres that project toward the brain; and the central transmission (T) cells in the dorsal horn (Melzack and Wall, 1975).

The hypotheses advanced by the theory may be summarized as follows:

(i) That the "substantia gelatinosa", a functional unit of densely packed cells extending the length of the spinal cord, acts as a gate control mechanism that modulates the afferent patterns before they influence the T cells.

(ii) That the afferent patterns in the dorsal column system act, at least in part, as a central control trigger which activates selective brain processes that then influence, by way of descending fibres, the modulating properties of the gate control system.

(iii) That the T cells activate neural mechanisms which comprise the action system responsible for perception and response.
(Melzack, 1973; Melzack and Wall, 1975).

The theory incorporates the concepts of specificity, since it recognises the actions of A-delta and C fibres, and that of patterning or summation, suggesting that perception and response in relation to pain occurs when the output of the T cells reaches or goes beyond a critical level. In other words, "there is a temporal summation or integration of the arriving barrage by central cells which finally results in pain perception and response when the integral exceeds a preset level" (Melzack and Wall, 1975).

Suggested inhibitory mechanisms which close "the gate" and thus reduce or eliminate pain perception include,

(i) stimulation of the large-diameter cutaneous, afferent nerves (e.g. by vibration, rubbing, or scratching);

(ii) stimulation of nerve fibres of the reticular formation in the brain stem (e.g. by distraction); and

(iii) stimulation of central control centre (including the influence of emotional factors (Siegele, 1974).

The gate-control theory has not been without its critics. Primarily the criticism comes in response to conjectural propositions which have not been substantiated by "uncontestable" experimental-physiological findings (Schmidt, 1972; Iggo, 1972). As the Leading Article in the British Medical Journal (1978 b) suggests, we are still uncertain about the location of the modulating mechanisms within the spinal cord, about the identity of the transmission (T) cells, or about the exact role of the substantia gelatinosa.

In spite of such criticisms, however, the gate-control theory has had considerable impact on research, theory development, and treatment of pain. One of the effects has been a renewed recognition of the multi-faceted nature of pain, which in turn has helped the development of multi-disciplinary pain clinics, and the use of various psychotherapeutic techniques in the treatment of pain (Melzack, 1973; Sternbach, 1974).[1] The use of acupuncture in the treatment of pain has received considerable attention (Siegele, 1974), as has the use of transcutaneous electrical stimulation (Gramse, 1978).[2] Another effect of the gate-control theory has been to point to the relative

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1 For specific examples see: Gerschman, J.A., Reade, P.C., Burrows, G.D. and Wright, J. The management of chronic oro-facial pain at a multi-disciplinary pain clinic, IN Peck, C. and Wallace, M. (Eds), Problems in Pain, Sydney, Pergamon Press, 1980, 166-172; Hilgard, E.R., A neodissociation interpretation of pain reduction in hypnosis, IN Weisenberg, M. (Ed), Pain: Clinical and Experimental Perspectives, St. Louis, C.V. Mosby, 1975, 210-224; Mastrovito, R.D., Psychogenic pain, American Journal of Nursing, vol.74, n 3, 1974, 514-519.

2 For additional examples see: Dorsch, N.W.C. and Ruhle, H.M., Reduction of post-operative pain by transcutaneous electrical stimulation, IN Peck, C. and Wallace, M. (Eds), Problems in Pain, 232-236; Gaumer, W.R., Electrical stimulation in chronic pain, American Journal of Nursing, Vol.74, n 3, 1974, 504-505.

dearth of knowledge about certain aspects of pain. With research studies focusing predominantly on the neuro-physiological properties of pain, little has been written about the subjective experience of pain and suffering (Copp, 1974), or about the socio-cultural factors which influence such experiences (Wolff and Langley, 1968).[1]

BACKGROUND TO THE PRESENT STUDY

As a result of the factors outlined above, we currently know very little about the way people from different cultural backgrounds, conceptualize, feel, and respond to a subjective experience of pain. Such an experience finds its expression in verbal and non-verbal behaviours which to a greater or lesser degree are culturally prescribed and therefore are similar in individuals belonging to a common cultural group. Since much of the behaviour associated with pain is designed to communicate the presence of pain, difficulties in communication may arise if the care provider is a member of one culture and the person in pain is a member of another culture. This problem, and its elucidation, have important implications for the development of substantive theory of pain, as well as for clinical practice.

On a more practical level, the impetus for this study came from several sources and reflects a combination of factors:

(i) As a nurse the researcher has become increasingly aware of the fact that pain features as an important and sometimes overwhelming issue for the people experiencing an illness or having surgery. From the point of view of nursing theory and practice, however, the issue of pain would appear to be poorly understood. This study may therefore be seen as a response to the need to add to the body of knowledge about pain which would have direct clinical relevance and applicability.

(ii) The researcher's clinical experience of nursing in both New Zealand and Australia has led to an awareness of the

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[1] See also: Blaylock, J., The psychological and cultural influences on the reaction to pain: a review of literature, Nursing Forum, Vol.7, n 3, 1968, 263-274.

problems some people from minority ethnic groups face when trying to communicate their experience of pain and suffering. As health care professionals we do not know enough about the way people from culturally different backgrounds feel, think and cope when they are ill or in pain.

(iii) As an individual, the researcher has experienced migration and has lived in at least two culturally distinctive societies, those of Yugoslavia and New Zealand. This first hand knowledge of two cultures and their languages is regarded by the researcher as particularly relevant since it can make for easier and, one would hope, richer communication and allow for a greater degree of rapport between the subjects and the investigator.

The choice of the research topic therefore reflects both the researcher's interests and skills in nursing and in cross-cultural communication.[1] The study examines the experience of pain in surgical patients from two culturally diverse backgrounds. The term "Yugoslavs" is applied to those participants in the study who were born in Yugoslavia, but who migrated and now live in Australia. The term "Anglo-Australians" is borrowed from Harris and Smolicz (1976) and applies to Australian-born subjects with British or North European origins who were socialized in the Anglo-Saxon based Australian "core" culture.

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[1] Initially, it was planned that the study be undertaken in New Zealand rather than Australia. However, this plan was abandoned for two reasons.

First, the number of people of Yugoslav origin living in New Zealand is relatively small. Their number, geographical distribution, and likely rate of hospitalization for surgery are such that any project involving them would have required a protracted period of data collection with inadequate control over many of the environmental variables.

And second, a study of a Samoan or a Cook Island group was also considered, but inadequate linguistic skills (and knowledge of the cultures generally) made study in this area impractical. Exclusion of non-English speaking subjects would have resulted in a biased sample, while their inclusion would have required the services of a skilled interpreter. Even if such a person were to have been available the quality of rapport between the subjects and the investigator would have been affected to some degree.

STATEMENT OF THE PROBLEM

The problem which this study aims to investigate may be stated as follows:

> What are the experiences of pain in patients following abdominal surgery in terms of their perceptions, attitudes, and behavioural responses? What are the similarities and differences between the patients of Anglo-Australian and Yugoslav background, and can differences in attitudes and behaviour between the two groups be explained on the basis of cultural differences?

AIMS OF THE STUDY

The aim of the study is to describe and compare the experience of pain in surgical patients from two cultural groups, and to identify similarities and differences in their conceptualizations of pain, and attitudes and behavioural responses to pain. An integral part of the study is to generate hypotheses and concepts which may contribute to the formulation of substantive theory in the area of care of patients in acute pain.

STRUCTURE OF THE REPORT

The report falls into two parts, with the introduction and the following two chapters forming the first part, and the remaining five chapters, the second part. This introduction (Chapter One) has outlined the context for the present study, both in terms of the theoretical influences on the study of pain generally, and the more specific concerns of this particular study. Chapter Two deals with the review of literature and includes material related to definition of pain and the broad area of pain experience, as well as a discussion of the more specifically relevant studies of post-operative pain, cultural influences on the experience of pain, and the problems of communication, evaluation, and measurement of pain. The third chapter is devoted to the design and methodology of the present study, - dealing first with the issues of qualitative research and the more specific problems of cross-cultural research and then proceeds to a description of the study

which includes a statement of the study questions, definitions of terms, and a description of the study setting and the patients who participated in it.

Chapters four to eight comprise the second part of the report. The fourth chapter deals with the analysis of data and presentation of findings from a quantitative perspective. The three chapters which follow present and discuss findings mainly from a qualitative perspective. More specifically, Chapter Five deals with the experience of pain in terms of the patients' conceptualizations and feelings about its quality, intensity, and duration, and the observed behavioural responses. Chapter Six examines the problem of pain relief and control, while Chapter Seven discusses prospective and retrospective patient evaluations of pain and the experience of surgery. And finally, Chapter Eight presents the conclusions, and outlines the implications for both clinical practice and further research in the area of pain.

Chapter 2

REVIEW OF RELEVANT LITERATURE

> To attempt to understand the nature of pain, to seek to find its meaning, is already to respond to an imperative of pain itself. No experience demands and insists upon interpretation in the same way. Pain forces the question of its meaning, and especially of its cause, insofar as cause is an important part of its meaning.
>
> (Bakan, 1968)

For the purposes of this study, literature related to pain is examined from six specific viewpoints. In the first section of this chapter the focus is on the definition of pain. In the second section, different types of pain are discussed with particular relevance to post-operative pain. The third section examines literature related to the experience of pain, including laboratory and clinical studies of the individual's responses to pain. The focus of the fourth section is on laboratory and clinical studies of cultural factors in the experience of pain, while the fifth section deals with pain from the viewpoint of communication and the role of language in the expression of pain. Finally, the review focuses on studies of pain evaluation and measurement.

DEFINITION OF PAIN

Pain is an intensely private experience and we have no way of experiencing another person's pain. Perhaps for this reason, Beecher (1962, 161) states that "pain cannot be satisfactorily defined, except as every individual defines it introspectively for himself."

Apart from a few exceptions such as in the case of congenital insensitivity to pain, or in cases of religious exaltation (Edwards, 1950; Melzack, 1973), pain is usually perceived as unpleasant. However one defines it, as Hart (1979, 1405) stresses, "...the essence

of it is that it is unpleasant. It hurts!" Even this simple definition points to pain as a combination of sensation and emotion. In fact, how one defines pain may well depend on one's perspective and scientific training. The large body of literature dealing with pain reveals a variety of operational definitions. Inherent in many of the laboratory pain threshold studies is the notion of pain as a simple stimulus-response sequence influenced to a certain extent by various physiological factors. This assumption of a one-to-one relationship between stimulus intensity and pain intensity is, at least in part, related to the theoretical orientations provided by the specificity and pattern theories of pain discussed in the introductory chapter. The assumption has been seriously questioned, not only in relation to laboratory studies, but even more in relation to the clinical studies of pain (Huskisson, 1974; Over, 1980). The psychoanalytic theory of pain, on the other hand, defines pain as an affect, a warning of the danger of the loss of a part (or the whole) of the body (Szasz, 1957).

Part of the problem of definition lies in the fact that there are a number of levels of pain experience, so that "one person's pain is another's suffering and still a third's nociception" (Loeser and Black, 1975, 81). The terminology used will vary with presumed anatomical and/or psycho-physiological substrate under discussion. Thus, while it is acknowledged that pain is real in the sense that it is felt by a person (Spiro, 1976), the word "pain" is an abstraction, which is used to refer to many different phenomena, one class of which includes a wide variety of subjective experiences including the different sensations (Sternbach, 1970).

Perhaps the most complete definition of the concept of pain is provided by Sternbach (1970) who suggests that there are three major facets of pain:

(i) A class of subjective experiences, i.e. a personal, private sensation of hurt which is not directly available to clinical or experimental observation.

(ii) A harmful stimulus which is the source of the sensation, and which signals impending tissue damage, e.g. heat, cold, acid, as when one says "<u>that</u> hurts" - referring to such stimuli.

(iii) A pattern of responses, or a class of behaviours, which operate to protect the organism from harm, such as the escape and avoidance behaviours, physiological reactions, neurochemical stress responses, verbalisations, etc.

Pain therefore is not a single entity merely described in different ways. Rather, according to Graham (1967), pain denotes different concepts which have little in common except for the quality of physical hurt. "In this sense, the word is like 'beauty', having no existence of its own, but having an element common to a variety of specific experiences, and ultimately defined only by the experiencer" (Sternbach, 1974, 2).

The crucial role of the experiencer in defining what consistutes pain is also stressed in the nursing literature. Perhaps the broadest definition, and one which is in line with Sternbach's ideas, is presented by McCaffery (1972, 8), who states that "pain is whatever the experiencing person says it is and exists whenever he says it does." Although such a definition has certain appeal (and practical implications) it is only a starting point and invariably requires qualification. In examining McCaffery's definition of pain, Oberst (1975) has suggested that such a definition is adequate clinically only with those individuals who are able or willing to produce such a statement. Recognising this weakness, McCaffery herself qualifies the definition by adding that "whatever is said" includes "...all voluntary and involuntary behaviours and all verbal and nonverbal behaviours" (McCaffery, 1972, 10). By elaborating on her initial definition, however, McCaffery has shifted the focus of the definition from the person's verbal self report to the interpretation of the person's behaviours by the observer.

A concise definition, which has gained considerable acceptance (Hayward, 1975; Sternbach, 1974) is offered by Merskey (1973, 251): "Pain is an unpleasant experience which we primarily associate with tissue damage or describe in terms of such damage or both." This definition, although relatively simple, nevertheless addresses itself to the complexity of pain by recognising that;

(i) pain is an experience, and therefore more than just a neuro-physiological event;

(ii) pain is unpleasant, and therefore requires the subjective response of the experiencer to evaluate it in terms of its psychological meaning; and

(iii) pain, whatever its cause, tends to be experienced and described by the experiencer as originating in the body.

Given the purposes of the present study, with its focus on how surgical patients think about and communicate their experience of pain, Merskey's (1973) definition was deemed to be the most suitable one available and was accordingly adopted.

TYPES OF PAIN

Different types of pain may be classified according to their origin, for example, those that arise out of external stimuli (such as inflicted pain), those that are due to pathological processes in the body, those that arise as hallucination (e.g. as in schizophrenia, or hysterical conversion), and those which arise in conjunction with neurotic illness (Merskey, 1973). In practice, one often hears references to somatogenic, or physical pain, and psychogenic pain (Bakan, 1968; Mastrovito, 1974), not infrequently implying that since physical pain has clear bodily origins it is "real", whereas psychogenic pain is primarily psychological in its origins, i.e. "the person is presumed to be in pain because he needs or wants it" (Melzack, 1973, 39). However, as Szasz (1957) points out, for the experiencing ego all pain relates to the body and there can be no question so far as the ego is concerned about whether a pain it feels is "really" there or not. Similar sentiments are expressed by Engel (1959), Schoenmacker (1979) and Sternbach (1974).

A distinction needs to be made between acute and chronic pain. Sternbach (1974) suggests that acute pain (if its development is not too rapid) usually follows a course or a trajectory as follows. Initially there may be sensations of tightness, "twinges", or feelings of vague discomfort. As these intensify they are felt as mild pain and one has the awareness of experiencing pain. There may be sudden alarm,

or mild anxiety, as the person becomes concerned with the meaning and implications of the pain, and if the pain persists and increases in intensity the level of anxiety also rises, often to the point where there is fear that pain will increase in severity and get beyond control. According to Sternbach (1974), there is the tendency to assume that pain will increase in intensity at a constant rate, even though in experimental tests at least, the upper tolerance for pain is greater than we anticipate it to be (see Fig 1.1).

Chronic pain on the other hand, as illustrated in Fig 1.2, usually presents a different sequence of reactions. Since they no longer serve a useful purpose, defensive reflexes and physiological signs tend to diminish, while help-seeking behaviour becomes more urgent. Pain often varies in intensity, but seldom disappears completely, so that the person frequently has difficulties sleeping and hence his ability to cope with pain is reduced. Feelings of bitterness and despair may arise, with consequent irritability and preoccupation with self and pain. Since analgesics often prove inadequate, the pain tends to be seen as getting worse and the person may be referred to specialist physicians, psychologists or psychiatrists (Eland, 1978; Lipton, 1977; Sternbach, 1974).

Acute and chronic pain therefore tend to product different types of behaviour. Acute pain is usually marked by increases in cardiac rate, stroke volume, systolic and diastolic blood pressure, peripheral vasoconstriction, muscle tension, and pupillary diameter, and decreases in gastric motility and gastric blood flow, which are all indicators or concomitants of anxiety (Sternbach, 1968, 1976).[1] Chronic pain, on the other hand, is usually marked by disturbances in sleep, appetite, and libido, and by constipation, bodily concerns, irritability, work inhibition, and helplessness and hopelessness -

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1 For early research in this area refer to: Cannon, W.B., Bodily Changes in Pain, Hunger, Fear, and Rage (2nd Ed), New York, Harper and Row, 1963; for more recent discussions see: McLachlan, E., Recognising pain, American Journal of Nursing, Vol.74, n 3, 1974, 496-497; Schoenmacher, J.N., Psychological evaluation of pain relief, IN Becks, J.W.F. (Ed), The Management of Pain, Amsterdam, Excerpta Medica, 1979, 374-390.

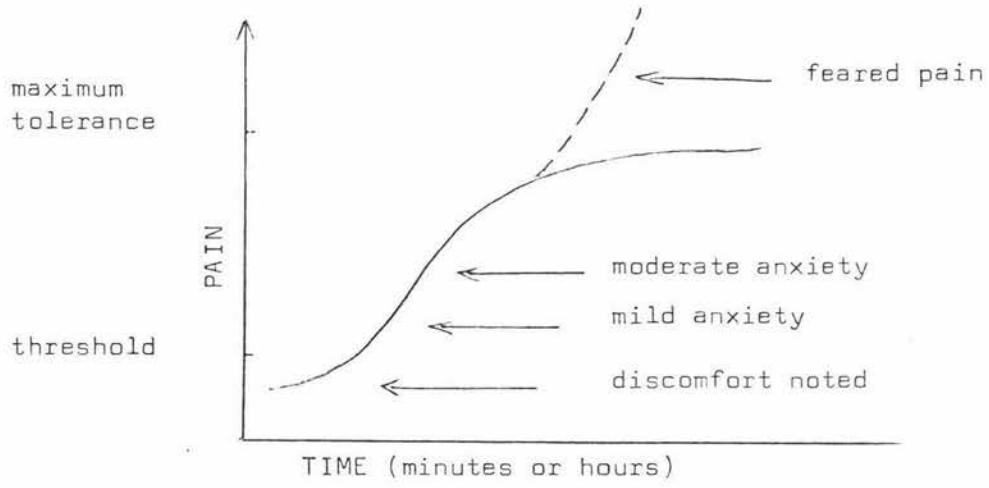

Fig 2.1 Sequence of Reactions to Acute Pain

(from, Sternbach, 1974, 6)

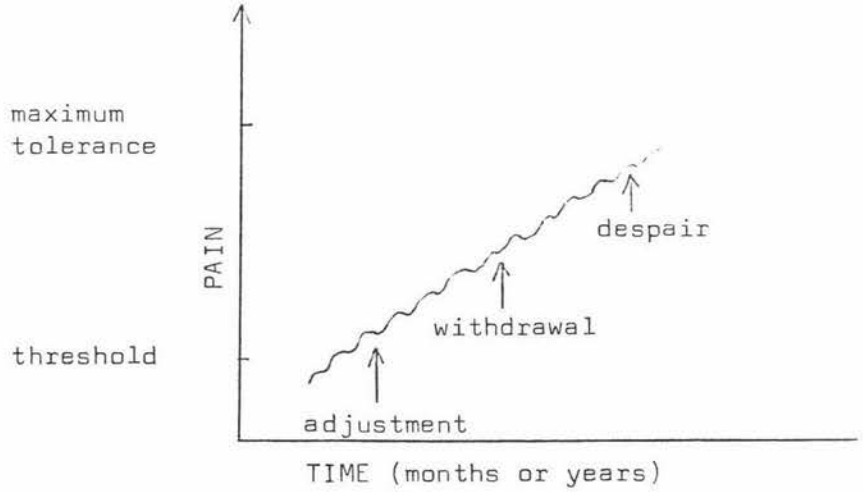

Fig 2.2 Sequence of Reactions to Chronic Pain

(from, Sternbach, 1974, 8)

frequent concomitants of depression (Sternbach, 1974).[2]

Post-Operative Pain

According to Swerdlow (1972), it is generally accepted by health professionals that post-operative pain, if it occurs, is acute in nature, of relatively short duration, and without the psychological deterioration produced by chronic, intractable pain. Others have suggested that such pain is most severe during the first 48 hours but usually subsides after this period (Shafer et al, 1971; Smith et al, 1971). Most of the pain is said to be due to trauma to the somatic nerve fibres in the skin, with extensive dissection or prolonged retraction of muscles and fascia producing deep, longer-lasting pain. Additional pain may arise from peritoneal irritation when gastric or intestinal contents are spilt during surgery, while wound pain may also be aggravated by skin sutures, tight dressings, swelling of the incision, and infection or haematoma around the wound (Lancet, Leading Article, 1964).

The most common set of assumptions, or working hypotheses related to post-operative pain, found in both literature and nursing practice, is summarised in the following statement:

> Because a certain amount of pain is expected after surgery, the doctor will leave orders for analgesics, so that the patient will be as comfortable as possible. (Smith et al, 1971, 239)

Research literature, however, suggests firstly that not all post-operative patients experience pain. Depending mainly on the site of operation, the number of patients reporting pain may vary from less than 20 percent to over 95 percent (Loan and Morrison, 1975).

Secondly, not all patients with post-operative pain will need analgesic drugs. A study by Moss and Meyer (1966) on fifty surgical patients demonstrated that relief of moderate pain, with or without anxiety, could be produced by deliberate nursing interventions which

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1 For further discussion of chronic pain and its effects see: Doherty, J., The patient in pain: handling the guilt feelings, The Canadian Nurse, Vol.26, n 7, 1978, 430-431; Hart, F.D., Pain as an old friend, British Medical Journal, Vol.1, 1979, 1405-1407; Pilowsky, I. and Spence, N.D., Pain and illness behaviour: a comparative study, Journal of Psychosomatic Research, Vol.20, n 5, 1976 (a), 131-134; Pilowsky, I. and Spence, N.D., Pain, anger and illness behaviour, Journal of Psychosomatic Research, Vol.20, 1976 (b), 411-416.

resulted in changed attitudes on the part of the patient and an alteration of his perception of the pain-associated stimuli. A deliberate use of the doctor-patient rapport in order to provide encouragement and support has been shown to reduce the need for analgesia and increase comfort in patients following elective abdominal surgery (Egbert, et al, 1964). It has also been shown that pre-operative preparation when planned and carried out in a structured, rather than haphazard way, can reduce the incidence of post-operative pain and the need for analgesia (Hayward, 1975). Other studies, however, have failed to produce similar results (Lindeman and Van Aernam, 1971).

Thirdly, there appears to be an assumption that analgesics will provide pain relief. The search for new drugs, the plethora of new pharmaceutical products over the last 20 years (British Medical Journal, Leading Article, 1978a), as well as research into different modes of drug administration (Hare, 1980; Nayman, 1980) nevertheless serve as a stark reminder that we have not yet found the "right drug", or solved the problem of reliable relief of post-operative pain. In fact, as Swerdlow (1972) suggests, one of the greatest difficulties in this area is that "we just don't know the natural course of post-operative pain." To find out would clearly pose very serious ethical problems.

The action of analgesic drugs on post-operative pain is experienced against a "moving background" - recovery from anaesthesia and presence of drugs in the bloodstream, feelings of nausea, varying degrees of physical immobility, as well as awareness of the significance of the operation, presence of other patients, the need to appear "brave" or behave as a "good patient", etc. Various studies have suggested that some commonly held assumptions are invalid, e.g. the assumption that if the patient is asleep he has no pain (Beland, 1970). A study by Lasagna (1960) showed that when awakened, 69 percent of one group of post-operative patients reported some pain.

Some studies have demonstrated that pain intensity was related to the type of surgery and the type of incision and suturing used (Bruegal, 1971). The highest levels of pain were reported by persons

with gastro-intestinal surgery and the lowest levels of pain by women with Caesarian sections. This suggests that the meaning or the significance of the wound and ensuing pain may be of considerable importance also (Beecher, 1956).

In considering treatment of post-operative pain, there appears to be a move towards exploration of alternative measures available, either on their own or in conjunction with pharmaceutical agents. Nursing researchers, for example, have suggested that measures aimed at reduction of anxiety such as pre-operative teaching may be useful in reducing post-operative pain (Hayward, 1975; Johnson and Rice, 1974). Others have stressed the importance of positive suggestion in alleviation of pain. In a study of 30 surgical patients Billars (1970), for example, concluded that simple measures or analgesic effects can be enhanced by a suggestion that the action will help to relieve pain. Others still, have advocated the use of psychological measures such as social modelling techniques, or hypnosis (Craig, 1975).

While it is not known how widely and with what effectiveness such measures are used, it would seem that some post-operative patients still experience considerable pain during their recovery (Watts, 1975). Hannington-Kiff (1974), for example, contends that the provision of post-operative analgesia remains erratic and that many patients are dissatisfied with the management of their post-operative pain. Hannington-Kiff goes as far as to suggest that patients today suffer more pain than in the past. This he ascribes to the fact that while administration of post-operative analgesia remains erratic, the situation is aggravated by the use of modern anaesthesia techniques (which allow for rapid recovery from the "general anaesthetic" but provide poor post-operative analgesia), decreased nurse-patient contact due to an increasing shortage of nursing staff, and early mobilization and discharge.

Similar findings are reported by Di Blasi and Washburn (1979), particularly in relation to the use of analgesic drugs. "It became clear that rarely was a patient's pain optimally managed and his functional capacity maintained", due to: inadequate communication between patients and staff and between different staff members; inadequate dosages and frequencies of administration of drugs

prescribed on a "PRN" basis; and failure to administer drugs regularly, particularly at night (Di Blasi and Washburn, 1979, 74).

In a qualitative study of "routine" surgical patients, Fagerhaugh and Strauss (1977) reported that, because the staff anticipate routine, nonproblematic recovery which includes some pain, such patients are frequently neglected when other patients with more complex and problematic conditions compete for the nurses' time. The result may be more pain than patients feel able to cope with.

Although using medical patients in their study (e.g. those suffering from cholecystitis, angina pectoris, carcinoma, etc.), Marks and Sachar (1973) also report significant problems of undertreatment with narcotic analgesics. Of the 37 patients interviewed, 32 percent continued to experience severe distress while another 41 percent were in moderate distress. While most patients were prescribed the maximum of six to eight doses of narcotics per day, the average actually received was under two doses. The authors went on to administer questionnaires to 102 house physicians and concluded that many doctors underestimated the effective dose range, overestimated the duration of action, and exaggerated the dangers of addiction of the narcotic drugs they prescribed. Similar points are raised by McCaffery and Hart (1976), who also suggest that nurses (largely responsible for drug administration) are prone to inadequate appreciation of the patients' need for relief from pain and are likely to overestimate the risk of addiction.

There is evidence to suggest that pain is more difficult to control when allowed to become severe, at least in part due to the fact that it destroys patients' confidence and increases anxiety and agitation (Hannington-Kiff, 1974). Pain is also easier to control with smaller but more frequent doses of drugs such as every 2-3 hours, rather than the traditional larger doses every 4-6 hours (British Medical Journal, Leading Article, 1978a). Increasingly, intravenous administration of narcotics is being advocated in the treatment of post-operative pain since it allows for better overall control of pain (British Medical Journal, Leading Article, 1978a; Hannington-Kiff, 1974; Hare, 1980).

If patients admitted to hospital for surgery fear pain, it would seem that their fears are not without some substance. And yet, relief of post-operative pain is important not only for humane and ethical reasons, but also because pain itself can have considerable effect on the patient's overall wellbeing and rate of recovery (McCaffery and Hart, 1976). Even moderate pain following abdominal surgery can lead to poor respiratory function and complications (Watts, 1975), while adequate analgesia can improve respiratory function (Dalrymple and Parbrook, 1976). Pain can also lead to haemodynamic changes such as an increase in heart rate, or blood pressure instability which may be detrimental to post-operative recovery. In addition, pain can lead to anorexia and inadequate intake of appropriate nutrients as well as increased cortisol production, both of which delay wound healing (Cooper and Schumann, 1979).

Whatever other measures may be used, the principal means of post-operative pain relief are analgesic drugs. Since, as has been shown, anxiety is not an infrequent concomitant of pain, it is important to distinguish between two types of drugs. First, those which act primarily at the peripheral level (e.g. aspirin-like preparations) and which may relieve pain but not anxiety, and second, those drugs which act both centrally and peripherally (e.g. narcotics) and have sedative as well as analgesic effects.

Mild analgesics of the non-narcotic variety are useful in the treatment of mild to moderate pain. Salicylates, the most common group of drugs of this type, are thought to act by inhibiting the synthesis of prostaglandins in inflamed tissues thus inhibiting the sensitization of peripheral receptors to mechanical or chemical stimulation. They also have antipyretic properties. Neither salicylates, nor paracetamol (another commonly used mild analgesic) have been found to be particularly effective in the treatment of severe pain, or that arising from smooth muscle spasm of the viscera (Drakontides, 1974; Woodbury and Fingl, 1975).

Narcotic analgesics, on the other hand, act primarily on the central nervous system, altering the affective component of the pain

experience by their capacity to induce relaxation, feelings of wellbeing and sleep (Drakontides, 1974; Hardy et al, 1967). Narcotics are therefore particularly useful in the treatment of moderate-severe post-operative pain and other pain of relatively short duration accompanied by anxiety. The most common trajectory of post-operative pain involves relatively rapid reduction of pain intensity over a period of a few days and therefore a rapid reduction and termination of medication with narcotics (Fagerhaugh and Strauss, 1977). It has been suggested, however, that patients' response to pain, rather than only its intensity, should influence the choice of analgesic given (Johnson and Rice, 1974).

THE EXPERIENCE OF PAIN

It is generally accepted that the experience of pain consists of two components, the sensory and the reactive (Hardy et al, 1967; Hedlin and Dostrovsky, 1979),[1] but attempts to formulate theoretically how much consists of which component have been unsuccessful (Merskey, 1973). Pain experience has been used by Zborowski (1952) to denote not only the sensation of pain but also bodily and psychological responses, while Sternbach (1968) has suggested that pain experience includes what he terms 'pain expression', 'complaints of pain', and 'effects of pain'. For the purposes of this study, pain experience refers to the totality of the cognitive and feeling states, physiological reactions, and behavioural responses made by a person conscious of suffering pain.

The Sensation of Pain

On the sensory level, Hardy et al (1967) have postulated four dimensions of pain:

(i) Quality, e.g. ache, burn, prick.
(ii) Intensity, e.g. mild, moderate, severe.
(iii) Extension, e.g. sharp, radiating, diffuse.
(iv) Duration, e.g. spasmodic, constant, of short or long duration.

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[1] For further discussion see: Johnson, J.E. and Rice, V.H., Sensory and distress components of pain, Nursing Research, Vol.23, 1974, 203; Schmitt, M., The nature of pain, Nursing Clinics of North America, Vol.12, n 4, 1977, 621-629.

Except in laboratory situations, however, where subjects can be trained to focus on the sensation of pain to the exclusion of other sensations, pain is rarely experienced in isolation (Hardy, 1962). In clinical situations, pain is usually associated with an admixture of other sensations such as heat, pressure, or nausea (Brain, 1962), so that both the person experiencing the pain, and even more the observer, may have difficulties in isolating pain sensation from other sensations and responses present in the situation (McLachlan, 1974; Sternbach, 1968). Hardy et al (1967) have also suggested that, as well as being affected by other sensations, the sensation of pain can be altered by factors such as tissue damage and (less frequently) by primary or secondary hyperalgesia.

Studies of Pain Threshold and Pain Tolerance

One outcome of laboratory studies of pain on the physiological level has been the conclusion that the pain perception threshold (i.e. the intensity of stimulation at which pain is first reported) falls within a relatively narrow range and remains constant in one individual over time, and between individuals, regardless of sex, age, or previous experience of pain (Hardy, 1962; Hardy et al, 1967). Other researchers, however, maintain that the evidence is inconclusive (Sternbach, 1968). There is much stronger consensus, however, in relation to variations in the pain tolerance level or threshold (i.e. the duration of time or intensity at which a person is willing to endure a stimulus beyond the point at which it began to hurt).

Various studies have indicated that pain tolerance is higher in those relatively free of anxiety (Beecher, 1966; Woodrow et al, 1972), and in non-neurotic subjects (Sternbach, 1968). Sternbach's (1968) finding that pain tolerance was higher in extroverted individuals, has not always been confirmed in clinical situations, however (Dalrymple et al, 1972). The majority of studies indicate an increased pain tolerance with age, particularly in laboratory studies of cutaneous pain (Chapman and Jones, 1944; Sherman and Robillard, 1960). Woodrow et al (1972), on the other hand, in their study of over 40,000 subjects in which deep pain was produced by applying pressure to the Achilles tendon, reported that pain tolerance decreased with age for both men and women.

The difficulty in applying such findings in clinical practice arises from the fact that pain of pathological origin differs from pain of experimental origin (Beecher, 1962). The attraction in studying experimentally induced pain is mainly due to the "measurability" of stimulus intensity (Husskison, 1974; Over, 1980), and the greater potential for control of other variables present. Laboratory studies have often concentrated on pain perception threshold, which shows no dependable response even to large doses of narcotics, or the use of placebo (Beecher, 1966), since it is possible to isolate pain sensation as an entity and focus on only this one aspect of the total pain experience (Hardy, 1962). Experimentally induced pain, whether produced by electrical stimulation,[1] thermal radiation,[2] pressure,[3] or tourniquet-induced ischaemia,[4] is usually of short duration, sharp, and under the control of the subject in that it can be terminated at his request (Beecher, 1966; Sternbach and Tursky, 1965). Clinical or pathological pain, on the other hand, is usually more sustained (Beecher, 1966), the nature of the stimulus is often unknown, and its intensity difficult to measure, while severity of disease pathology is not clearly related to severity of pain (Huskisson, 1974). Although studies of experimentally induced pain have a great deal to contribute to the overall understanding of pain, it may be worth remembering that "...experimental pain tolerance has no relationship to the tolerance of clinical pain, which may continue well beyond the point of the individual's readiness to accept it" (Elton et al, 1980).

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1 For studies of induced pain using electrical stimulation, see, for example: Craig, K.D. and Best, J.A., Perceived control over pain: individual differences and situational determinants, Pain, Vol.3, 1977, 127-135; Sternbach, R. and Tursky, B., Ethnic differences among housewives in psychophysical and skin potential responses to electric shock, Psychophysiology, Vol.1, 1965, 241-246.

2 See for example: Hardy, J.D., The pain threshold and the nature of pain sensation, IN Keele, C.A. and Smith, R. (Eds), The Assessment of Pain in Man and Animals, London, University Federation for Animal Welfare, 1962, 170-201.

3 See for example: Woodrow, K.M., Friedman, E.D., Diegelaub, A.B., and Collen, M.F., Pain tolerance: differences according to age, sex, and race, Psychosomatic Medicine, Vol.34, 1972, 548-556.

4 See for example: Johnson, J.E. and Rice, V.H., Sensory and distress components of pain, Nursing Research, Vol.23, 1974, 203; Sternbach,R.A., Pain Patients, Traits and Treatment, New York, Academic Press, 1974.

The present study was designed to take into account the experience of pain as perceived by the experiencer who is aware of more than just the intensity of pain and its sensory qualities. The study was also designed to ensure that its findings would have direct implications for clinical practice. The assumption, based on the literature reviewed above, was that valid answers to questions (such as - "How do people cope with pain and the uncertainty of its meaning, duration, or effects?", or "How adequate is the control of pain, from the patient's point of view?") could be obtained only if the study was undertaken in a clinical setting where pain is part of an illness experience.

Clinical Studies of Pain

In clinical situations, in addition to the factors already mentioned, the experience of pain is greatly influenced by the significance or the meaning given to pain, wound, or disease pathology. Beecher (1956), in his classical study of 150 wounded soldiers and 150 male civilians with similar wounds, found that the intensity of suffering and requests for analgesia were largely determined by what the pain meant to the individual. To the soldiers, being wounded meant that they were alive and able to return home, out of danger. Many of them reported having no pain, and when asked if they wanted pain relief (a narcotic) only 32 percent answered in the affirmative. By comparison, 83 percent of the civilians wounded in accidents or undergoing surgery, accepted an offer of pain relieving medication. The meaning they attached to the experience often related to loss of independence, interruption of earning ability, and possible financial implications. In a similar way, pain experienced by soldiers in combat, by athletes, or even children in a fight, has different meanings and is often responded to differently than pain resulting from cancer, myocardial infarction or other threatening conditions (Beecher, 1962; Szasz, 1957).

Another common factor which influences the individual's experience of pain is memory for pain which seems to be inferior to the memory of other sensory modalities (Benedetti, 1974; Swerdlow, 1972). In a study of over one hundred patients, Copp (1974, 492) reported that many found it difficult to answer questions while experiencing pain, and yet later, when the pain had subsided, "they were unable to answer because they were in the process of denying and forgetting". Because of this process,

the memory of pain is not always reported as 'painful' (Benedetti, 1974).

Various studies of responses to pain in clinical settings have indicated that pain expression, i.e. the style of responding to a painful stimulus, varies with the degree of extroversion (Sternbach, 1968), the meaning given to pain (Copp, 1974), and ethnic membership (Zborowski, 1952 and 1969). It has also been reported, however, that pain expression is not related to pain tolerance, but is usually a matter of childhood socialization and cultural prescription (Sternbach, 1968; Wolff and Langley, 1968). Complaints of pain, i.e. the readiness to present pain as a symptom, have also been found to vary with age, personality traits, and socio-cultural background (Sternbach, 1968). Another factor, practically unmentioned in the literature until recently although probably recognised intuitively by both patients and health professionals in clinical situations, relates to the organizational setting in which the experience of pain takes place. As the result of a two year study in twenty selected wards of eight hospitals in California, Fagerhaugh and Strauss (1977) reported that underlying philosophies of pain and the political processes of persuasion and negotiation between patients in pain and the health personnel play a significant role in pain expression and complaints of pain on the part of the patients. Di Blasi and Washburn (1979), in their comments on medical and surgical patients in one unit of a Boston hospital, support these findings.

In relation to the effects of pain, Sternbach, 1968) reports that pain is disruptive of behaviour. Learning and reaction time may be impaired by pain, while pain may also elicit aggressive behaviour. Although individual differences are important, and some patients inhibit rather than express their anger overtly, there is thought to be a significant relationship between emotions such as anger and hostility and pain, particularly in chronic pain patients (Pilowsky and Spence, 1976a; Trigg, 1970). Thus, in searching for behavioural indicators of pain and its consequences, whether in designing a research project or in clinical assessment of pain, one is faced with the reality of a broad range of behaviours, none of which in isolation is either a necessary or a sufficient sign of pain.

Although attempts have been made to isolate pain-specific responses, in clinical situations particularly such attempts have not met with much success (Sternbach, 1968). Apart from such physiological responses as increases in heart rate and blood pressure (mentioned in relation to acute pain), other responses may include nausea and vomiting, dyaphoresis, hyperventilation, and vital capacity impairment (Dalrymple et al, 1972; Sternbach, 1968). Although such responses are frequently used as indicators of pain (Bruegal, 1971; Dalrymple et al, 1972; Parbrook et al, 1973) the investigators readily accept that they are not pain-specific and may be correlated with fear or anxiety as well as more general responses to stress. Except for dyaphoresis, nausea, and vomiting, the present study has not focused on the physiological indicators of pain, mainly because such indicators do not tell us enough about the severity of the sufferer's pain or how the person in fact feels about the pain experience. At best, such indicators may point to the presence of pain, but are clearly inadequate in a study attempting to describe the experience of pain.

In addition to physiological responses, however, people in pain may employ coping styles or strategies in order to minimise or cope with the experience (Copp, 1974). Moaning and groaning, crying, hand clenching, restless moving about the bed or maintenance of certain body positions, ritualistic behaviours such as rubbing, pounding, biting, or rocking, may all be part of the coping behaviour in pain (Copp, 1974; Zborowski, 1969). Other behaviours may include withdrawal or increased requests for attention by either verbal or non-verbal attempts to communicate the experience, or both (Dunn, 1976).

CULTURAL FACTORS IN THE EXPERIENCE OF PAIN

The relative dearth of material related to socio-cultural influences on the experience of pain is well recognised (Blaylock, 1968; Wolff and Langley, 1968). Less frequently acknowledged, although probably just as important, has been the dominance of Anglo-Saxon cultures and their values in pain research (Fink, 1976). One recognisable effect of this situation has been the direction of some

research studies aimed at reduction or suppression of pain-related behaviours, such as the facial expressions of pain (Friedman, 1979). As well as perhaps being inappropriate in some cultural settings, it is arguable, according to Hannington-Kiff (1974), whether suppression of the pain-related behaviours also reduces the actual feelings of pain.

Montagu (1971) suggests that culturally prescribed socialization experiences may influence individuals towards accepting certain expressions of affect and behaviour while rejecting others. In this way, child-rearing practices may influence expressions of pain in later life in terms of sharing such experiences with others or electing to withdraw from social contact when in pain. Kupferer (1965), for example, describes 'couvade', the ritual found in Central and South America during which the husband takes to his bed and behaves as though he were going through the process of giving birth, while the wife suffers relatively little pain. While such extreme practices may be absent in other cultures, the concept of shared suffering can be found elsewhere. Minc (1963) suggests that the experience of pain among East European groups is exemplified by sharing because of the belief that an individual's suffering 'redeems his fellows' and therefore is to be shared.

Cultural differences between groups may be seen both in relation to attitudes to pain and in behavioural responses, including verbalisations which describe or qualify such experience (Blaylock, 1968; Fabrega and Tyma, 1976a; Zborowski, 1969). Few controlled studies, however, have been carried out to test the hypothesis that racial or cultural differences in attitudes towards pain should be reflected in psychophysiological correlates.

Chapman and Jones (1944) compared responses to pain of 130 subjects of 'Northern European' stock (not otherwise specified) with those of 25 'Southern Negroes', 15 'Ukrainians', and 30 subjects of 'Jewish and other Mediterranean races', using radiant heat to the forehead as the pain stimulus. The Northern Europeans were reported to have the highest pain perception and pain tolerance thresholds, while the Negroes had lower thresholds with only a small difference between the perception and tolerance thresholds. Subjects of

'Mediterranean origin' resembled the Negroes on both measurements, with one difference - while the Negroes tended to show little or no overt response when indicating the point of maximum tolerance, the Mediterranean subjects apparently protested at being subjected to such intense stimulus. (The 'Ukrainians' were not mentioned in the discussion of the results).

The 1952 study by Meehan, Stoll, and Hardy (reported in Hardy, 1962) also used the radiant heat technique and involved 26 Alaskan Indians, 37 Eskimos, and 32 Caucasians. Although criticised for lack of adequate controls (e.g. skin temperature prior to testing, or instructions given to the subjects), the study indicated that cultural differences did not produce statistically significant differences in the pain perception threshold. Since the study did not record the entire reaction to pain, it is not known if there were any differences in the style of responding between the groups.

Similar findings for the pain perception threshold were reported by Sternbach and Tursky (1965) as the result of their study of 60 Irish, Italian, Jewish, and 'Yankee' housewives. There were no significant differences between groups in terms of age, and most subjects were classified as belonging to the middle class. Electrical stimulation of the forearm was used as a pain stimulus. The measurement of pain tolerance threshold revealed significant differences between the groups. The 'Yankee' housewives showed the highest mean scores, followed by the Jewish and Irish women, while the Italian women had the lowest mean scores. Furthermore, while the Italian women focused on the immediacy of the situation and expressed a desire for the relief of pain, the 'Yankee', Irish, and Jewish women were undemonstrative. A further study with the same subjects demonstrated that the Irish women had consistently lower palmar skin resistance, a result which the authors attributed to considerable (but overtly unexpressed) anxiety (Tursky and Sternbach, 1967). Because of great intragroup variability, and overlap between groups, the researchers concluded that an individual's response pattern could not be predicted solely on the basis of ethnic membership.

Another study involving Jewish women is reported by Lambert, Libman, and Poser (1960) who used two groups of 80 and 160 Canadian

university students to study the effects of religious affiliation, rather than ethnicity, on pain tolerance. Initially, the subjects (all women) were asked to participate in a scientific study as students, but following testing they were given information that would have led them to believe that there was scientific evidence to indicate that their religious group was characteristically less able to withstand pain than others. While Jewish women showed an increase in their mean pain tolerance threshold after receiving the information, the Protestant women did not. Using the second group of 160 subjects the authors stressed the comparison between Jews and Christians and told some subjects that their group typically took less or more pain than other religious groups. Both Jewish and Christian women showed increases in their pain tolerance when told that their groups were typically inferior in this regard, but only Christian women increased their pain tolerance after being informed that their group was superior in pain tolerance. The study did not find any evidence for differences in normal pain tolerance thresholds attributable to religious differences.

Woodrow et al (1972) report differences in pain tolerance thresholds between racial groups identified on the basis of skin colour as White, Orientals, and Blacks. Using over 40,000 subjects as part of a multiphasic screening examination for a particular health insurance plan in California, the researchers applied pressure to the Achilles tendon in order to produce deep as well as some cutaneous pain. While the Whites showed the highest average pain tolerance, and the Orientals the lowest, these differences were less marked than those associated with sex and age. Both age and race differences in pain tolerance were more marked in men than women, while educational level was not found to be related to pain tolerance in any constant way.

It is interesting to note that Pain, a new journal launched in 1975, published only one article during its first three years that dealt with cultural factors. The study reported in the article was conducted by Knox et al (1977). Using laboratory induced pain and acupuncture, the authors found no evidence to support the widely held stereotype of "Oriental stoicism" since these subjects reported pain as significantly more painful and distressing than did the Caucasian

subjects. The study also failed to demonstrate any inherent difference in response to acupuncture by the Chinese subjects.

If laboratory studies of cultural influence on the experience of pain are not numerous, clinical studies are even fewer. Winsberg and Greenlick (1967) report a study of responses to pain in childbirth of 365 lower or lower-middle class Black and White mothers in one Michigan hospital. The staff were asked to rate each patient according to the estimated degree of pain (from 'very mild' to 'very severe' pain), associated demonstrativeness (from 'very calm' to 'very excited'), and cooperativeness during labour (from 'very cooperative' to 'very uncooperative'). The patients were also asked to indicate the intensity of their pain experience. The researchers concluded that "there are no observed Negro and White differences in pain response; and the involved personnel tend to evaluate the patients in the same way" (Winsberg and Greenlick, 1967, 224). While the reliability of the method used may be questioned, it is perhaps significant that the mothers in the study uniformly indicated their pain as more severe than was judged by the staff who provided the ratings.

In her study of 26 Black and White patients in one New York hospital, Reynolds (1974) found that Black patients reported difficulties in describing their pain. This difficulty was not thought to be due to verbal ability but rather to the lack of practice. Among this group, "pain is apparently not discussed except to acknowledge its presence" (Reynolds, 1974, 59). The majority of both Black and White patients reported a preference for being alone when in pain, but while all White patients stated that they would report their pain to either doctor or nurse, 92 percent of Black patients indicated that they would prefer to report their pain to the doctor. Some support for these findings is provided by McCabe (1960) who, on the basis of a small exploratory study in one southern hospital, reported that Negro patients discussed their pain only in general terms and were hesitant in asking for pain relief even when nurses considered them to be in considerable pain.

Pasquarelli (1966), on the basis of personal observation as a medical practitioner, states that the general opinion of Australian

doctors is that Italian patients have a very low pain threshold. Pasquarelli contends, however, that when faced with severe pain, and especially when given support by others, Italians are no different than other ethnic groups in their tolerance for pain. The differences noted by doctors may lie in the fact that Italians tend to be impatient towards pain and have expectations that analgesic drugs should act rapidly. In addition, Pasquarelli suggests that Italians may have an extremely low 'vocal threshold' for pain, hence the cries of 'mama mia' and 'Maria Virgine', invoking the assistance of the mother figure. A related observation among Italians and other southern Europeans is their belief, according to both Minc (1963) and Pasquarelli (1966) that medicine taken orally is not as effective as that given by injection - this being particularly true for pain relief. Neither these, nor other writers, however, make any mention of whether this belief is restricted to southern Europeans or whether it exists among other groups as well. It is also worth noting that the belief is not without basis in fact, since it is well recognised that in severe acute pain (such as that of trauma or renal colic, for example) milder analgesics given orally are usually inadequate to relieve the pain, while narcotics given by injection are more likely to be effective (Loan and Morrison, 1973).

Writers such as Minc and Pasquarelli, are in many ways typical of those writing about the cross-cultural aspects of pain, and health issues generally, in that frequently they are members of ethnic minorities and they practice as health professionals.[1] Although such writers bring experience and creative insight to the field, their writing nevertheless remains impressionistic and lacks supportive evidence. Another dimension is added by writers who have utilised case studies of individual patients or vignettes from several case histories, usually in order to illustrate the problems of cross-cultural communication (De Windt, 1979; Larkins, 1977). Again, such writings lack comprehensiveness and theoretical integration.

The most comprehensive work dealing with the experience of pain

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[1] For additional examples see: Laakso, L., Migrants in hospital, Australian and New Zealand Journal of Obstetrics and Gynaecology, Vol.13, n 4, 1973, 231; Moraitis, S., Medico-social problems of the Greek population in Melbourne: paediatric problems as seen by the medical practitioner, Medical Journal of Australia, Vol.2, 1972, 881-883; Moraitis, S. and Zigouras, J.H., Impressions on Greek immigrants, Medical Journal of Australia, Vol.1, 1971, 598-600.

from a cross-cultural perspective is still the study carried out in the early 1950's by Mark Zborowski (1952, 1969). Because Zborowski's study remains a reference point for any discussion of the role of culture in the experience of pain, and because the approach and aims of the present study draw heavily from the work of Zborowski, his study is discussed here in some detail.

Using a form of the anthropological field study approach, Zborowski collected data on patients in a Veterans Administration Hospital in New York. The ethnic groups represented were Irish, Italians, Jews and "old Americans" (those of Anglo-Saxon origin whose ancestors have lived in the U.S.A. for more than three generations). Most patients were of lower or lower-middle class background, ranged in age from 20 to 65 years, and all were males. Medical reasons for hospitalisation included back pain and vertebral disc lesions, migraine headaches, amputations with phantom pains, and various other disabilities including cancer and heart disease.

Zborowski's findings indicated that both Italian and Jewish patients were demonstrative in their expressions of pain, they complained more readily and engaged in behaviours which the staff interpreted as a tendency to exaggerate their pain experience. The study revealed some differences, however. The Italians seemed to be mainly concerned with the "here and now" of the experience, were disturbed by the actual pain sensation, when in pain called for pain relief, and were primarily interested in the analgesic effectiveness of drugs administered. When not in pain they seemed to forget their suffering and tended to show a happy disposition. Patients of Jewish origin, on the other hand, tended to focus their attention on the symptomatic meaning of pain and its implications for their health, welfare, and the future welfare of their families. They tended to be reluctant to accept analgesic drugs, worried about addictive properties of such drugs and the fact that drugs even when relieving pain did not cure the underlying pathology. Even when free of pain they tended to display depressed and worried behaviour, and scepticism about the attending doctor's ability to provide a cure for their illness.

In relation to the "old American" patients, Zborowski concluded that they, more than any other group, seemed to be aware of an ideal pattern of patient behaviour, and tried very hard to conform to it. Their complaints of pain tended to stress its quality, duration and localisation, i.e. its sensory qualities. Emotional expressions such as groaning or crying were suppressed, since "it won't help anybody", but were nevertheless observed when the patient had severe pain. Usually, however, the patient would withdraw from family, other patients and staff. Emotionality was seen as purposeless and as a sign of deviance, while cooperation with the medical and other staff was stressed, especially when suffering was seen as unnecessary and the doctors were seen as having the means to relieve it. Most often pain was seen as a warning signal with implications for one's health generally - a signal that should be reported immediately so that those with knowledge and expertise can take care of it.

Patients of Irish origin were similar to the "old Americans" in that they also tended to de-emphasise the emotional impact of their pain experience, withdrew in order to be alone when in severe pain, expressed confidence in their doctors, and stressed the need to cooperate with the staff. However, in contrast to the optimism of the "old Americans", the Irish not only had greater difficulty in describing their pain in detail, but also tended to be rather helpless and resigned to their illness and the suffering involved, looking for the cause of pain within themselves. From this study, Zborowski concluded that a major factor involved the cultural approval for public expression of pain which was absent in the Irish and the "old American" group. The Jews and the Italians were not constrained in the same way, however, and their public suffering was designed to bring family and professional support and sympathy. In addition, Jewish patients had a strong belief in the cathartic value of crying out when in pain.

On the basis of these findings, Zborowski (1952, 24) concluded that:

(i) "Similar reactions to pain manifested by members of different ethnocultural groups do not necessarily reflect similar attitudes to pain."

(ii) "Reactive patterns similar in terms of their manifestations may have different functions and serve different purposes in various cultures."

Although, as Sternbach (1968) points out, most Anglo-Saxon or Nordic groups are seen as showing a higher threshold for pain tolerance than the Mediterranean (i.e. Latin or Middle-Eastern) types, such stereotypes are something of a myth. While members of different cultural groups feel and behave differently when in pain, ultimately, however, they all endure whatever pain their illness or trauma brings. Perhaps the greatest problem is the ready acceptance, among health professionals as well as others, of the cultural stereotypes (Ellard, 1969). In Australia, where the present research was carried out, the situation is not helped by the fact that most studies dealing with health issues extrapolate from Greeks and Italians to the rest of the non-English speaking migrants, with an identifiable trend in literature, education, and elsewhere "...to imply that migrant equals Greek/Italian" (Martin, 1978, 168). Due to a lack of suitable subjects, Zborowski's attempts to include some Polish patients in his study were unsuccessful (Zborowski, 1969), and this author is not aware of any comparable studies being done with any other Slavic groups. It may be that Yugoslavs, at least, have attitudes and behavioural norms more akin to those of eastern and other south Slavs, rather than the Latin groups. As far as this author is aware, there have been no studies of either Yugoslavs or Anglo-Australian groups, the two groups this study is concerned with, in relation to their attitudes, beliefs, or behaviours in pain.[1]

Because of the lack of more relevant material, the Zborowski study has been used, both in the design of the present study and in the consideration of the content of observations and interviews. However, no attempt was made to replicate the Zborowski study - rather

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[1] A computer search of the literature, including publications from Yugoslavia, has produced numerous references to medical studies of pain written from the physiological or medical perspectives, but none written from a cultural perspective. Approaches to individuals in two leading universities in Yugoslavia yielded no replies, while a reply from a well known journal dealing with health and medical issues stated that such material had not been published in Yugoslavia within the past 10 years.

on a much smaller scale, this study sought to extend the research into a cultural field not covered by other investigators.

COMMUNICATION OF PAIN

As already mentioned, an individual in pain may engage in a variety of behaviours, including motor responses, such as walking or wriggling; vocal responses, such as moaning or crying; verbal responses, such as cursing or asking for help; social responses, such as clinging or withdrawal from people, or behaviours designed to hide the pain (Zborowski, 1969). All of these behaviours may be seen as forms of communication, so that even though initial expression of pain is very likely spontaneous, what follows is a "fundamental method of asking for help" (Szasz, 1957).

As noted in an earlier section of this chapter (dealing with clinical studies of pain) the search for pain-specific responses has not proved particularly fruitful. Lasagna (1960) has stressed that both physiological concomitants (such as rises in blood pressure and heart rate), and observations of non-verbal behaviour (such as crying or hand clenching) correlate poorly with pain. As a result, we do not have an objective, reliable way of measuring the amount of pain experienced, or its quality. Thus, both researchers and those working with patients in pain must rely to a great extent on the individual's subjective evaluation of his experience (Agnew and Merskey, 1976; Brain, 1962). Particularly in clinical studies, where pain is experienced as part of an illness, and the presence of other variables reduces the degree of reliance which can be placed on physiological measures and non-verbal behaviours, most of the information has to come from patients' verbal reports (Lasagna, 1960).

In spite of this reliance on patient evaluation and report, however, very few studies have examined the roles which language, and culture generally, play in the expression and communication of pain. As Agnew and Merskey (1976) point out, surprisingly few attempts have been made to examine those words and phrases which are the essential commodity of pain transactions. If, as so often occurs, the care provider is a member of one culture and the person in pain is a

member of another culture, they are each likely to have been socialised to accept different norms of pain behaviour (Jacox, 1979; Queseda, 1976). Even individuals with common cultural backgrounds may have difficulties since communication of pain, both active and passive, is a complex process (Bond and Pilowsky, 1966).

Culture and language, however, affect not only the communication process but the total experience of pain since they influence perception, thought, and cognition (Fabrega and Tyma, 1976b). In the Thai language, for example, the choice of one of the three primary words for pain will communicate not only that the person has pain, but also what he considers to be its cause and aetiology. The terms are also linked to a body part. At the same time, the use of metaphor (e.g. "burning pain") is limited and non-verbal behaviour is used to a greater extent (than among English-speaking people) to communicate the special qualities of pain (Fabrega and Tyma, 1976b).

In the English language the situation is quite different, in that the four primary words (pain, ache, sore, and hurt) connote certain levels of intensity, but do not suggest the cause or location of pain, or its putative relationship to a state of illness. On the other hand, the English language is particularly rich in secondary pain terms which are used to qualify primary pain terms, or can be used instead of them (e.g. cutting, crushing, burning); it also offers a tertiary pain terms category, i.e. words used to elaborate on the experience of pain which, however, do not bear a special connection to pain per se (e.g. mild, deep) but are related to time, intensity, or affective evaluation of the pain (Fabrega and Tyma, 1976a; Fabrega and Tyma, 1976b). Zborowski (1969) suggests that English may be the only language in which the term "pain" signifies the quality of sensation itself. From its origins, it also carries certain connotations of penalty, or punishment (Fabrega and Tyma, 1976a; Zborowski, 1969).

In German ("schmerz") and in Slavic languages (Russian, "bol"; Polish, "ból"; Serbo-Croat, "bol"), no punitive connotations exist. Rather, in Serbo-Croat for example, the term is linked to the terms "bolest" and "bolestan" (meaning "illness", and "ill") and may also

denote anxiety and mental anguish. Language therefore does not denote a certain state of the situation - like a mirror, it reflects cultural values held by people who speak it (Zborowski, 1969).

Most studies of the language of pain have considered only one dimension - intensity. Melzack and Torgenson (1971) were the first to collect and categorise words used to describe pain. The three categories suggested are:

(i) Words that describe sensory qualities of pain experience, in terms of spatial, temporal, pressure, thermal, and other properties. Descriptions such as 'throbbing', 'burning', or 'sharp' would be some examples.

(ii) Words that describe affective qualities of pain, in terms of tension, fear, and autonomic properties that are part of the experience. 'Cruel', 'frightful', and 'sickening' are among the words cited.

(iii) Evaluative words that describe the perceived overall intensity of the whole pain experience, such as 'intense', 'mild', or 'agonising'.

Using laymen and health professionals, Melzack and Torgenson were later able to show support for the classification of the various words and their scaling along a common intensity dimension. Considerable agreement between laymen and health professionals in their classification of the various words is not surprising, however, and could be expected on the basis of their common socialization. The outgrowth of this work has been the development of the 'McGill Pain Questionnaire', a comprehensive tool designed to aid pain assessment, primarily in patients with chronic pain (Melzack, 1975).

Agnew and Merskey (1976) have suggested that commonly accepted descriptions of pain, e.g. "burning causalgia" or "pressure and constriction" of tension headache, are based not on research but common usage. In a study of 128 patients with chronic pain, where the patients were asked to describe their pain in their own words, the authors found that patients with organic diagnoses used more descriptive words than those with psychiatric diagnoses. In addition, advancing age (and by inference, experience) did not correlate with an

increase or decrease in the use of words, or with the more philosophically weighted words in the affective or evaluative categories.

Stressing that verbal self-report remains one of the most important means by which a doctor may routinely assess the quality and quantity of pain experienced by his patients, Bailey and Davidson (1976) conducted a study of 93 female nursing students and 90 male and female students with medical and non-medical background. The students were asked to grade, on a five point intensity scale, adjectives used in pain description. Their findings indicated that there were no consistent sex differences in the intensity ratings, and that while nursing and medical students agreed among themselves, they differed significantly from the other females in the sample. They also found that intensity related more to the affective-evaluative category than the sensory dimension, suggesting that understanding of pain intensity at the level of verbal self-report may require that health professionals shift their attention away from the sensory aspects of the experience to its affective components.

Looking at communication as "treatment transaction", Bond and Pilowsky (1966) examined the relationship between requests for analgesics, subjective assessment of pain at regular intervals, and the response of nursing staff, using 47 male and female patients with advanced cancer. The logical relationship of request for pain relief, followed by treatment, was evidenced with female but not male patients who were refused such treatment on a number of occasions. In addition, only women received the most powerful analgesics (morphine and pethidine), and the pain scores of these women were significantly lower than of those receiving less potent drugs (e.g. codeine). The outcome seemed to be that male patients had to communicate their pain more often, leading to the conclusion that communication of pain appears to be closely related to the nature of the staff-patient relationship.

Szasz (1957), who stresses the communicative meaning of pain, also points out that in order to secure help the person in pain has to make his experience intelligible to another person. From the perspective of the health professional, "communication implies translating the patient's experience into one of our own" (Brain, 1962, 5).

Szasz (1957) suggests that whether this is easy or difficult will depend on how well the persons who are interacting understand each other.

EVALUATION AND MEASUREMENT OF PAIN

As already mentioned in the introductory chapter of this report, early studies of pain by modern scientists have been predominantly in the area of neurophysiology and biochemistry. Such studies, and those that followed, have focused primarily on the mechanisms of pain, the sensory components, and ways of establishing objective indicators of its intensity. The dominant issues included interest in the threshold of pain complaint, point of maximum tolerance under different conditions and with different subjects, and the difference between the threshold levels and the points of maximum tolerance in terms of pain duration or the strength of the noxious stimulus (Cannon, 1963; Chapman, 1944; Edwards, 1950; Hardy et al, 1967). Such methods are still employed, particularly in laboratory studies of induced pain, often using sophisticated techniques or equipment in order to produce finely controlled levels of noxious stimulation, or to detect physiological responses to such stimulation. Whatever the methods used to induce pain, however, the measurement of its intensity is always subjective since the subjects must translate their experience into a form which can be communicated to the researcher (Woodforde and Merskey, 1972).

Going on from the simple indications of the presence of pain or of the intolerable levels of pain, Wolff and his collaborators worked on the development of ordinal scales of pain intensity, using descriptive terms in common use in the early 1930's (Hardy, 1962). Detailed pain scales involve measurement of differential thresholds, i.e. determination of the smallest change in stimulus that can be recognised as evoking a change in pain intensity at least 50 percent of the time. The determination of this "just noticeable difference" (JND) for pain, carried out in the early 1950's by Hardy, Wolff and Goodell, revealed that there are approximately 22 JND's from zero pain to maximum pain, illustrating man's ability to discriminate between different levels of pain (Hardy, 1962). (By contrast, there are some 570 JND's for visual brightness).

Other methods of pain measurement have involved: (a) Peck's "thymometric" method, where the subjects are asked to match the intensity of their pain with the intensity of sound provided by an audiometer;[1] (b) colour charts consisting of several white, red, and black discs where subjects are again asked to match their pain intensity with individual discs consisting of varying amounts of red and black colour;[2] (c) pressure algometer readings in terms of subjects' responses to noxious stimulation;[3] (d) measurement of analgesic dosages required to abate pain;[4] (e) clinical descriptions of pain;[5] and (f) different variations of visual analogue scales.[6]

Most visual analogue scales are based on the "pain chart" suggested by Keele (1948). In proposing the use of the scale, Keele noted that patients often have difficulty in finding words to describe their experience, and are often confused as to which aspects of this experience are relevant to the observer. These points remain valid today so it is perhaps not surprising to find that visual analogue scales have gained considerable popularity with those studying pain in clinical areas. The scale proposed by Keele included five gradations

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1 See for example: Woodforde, J.M. and Merskey, H., Some relationships between subjective measures of pain, Journal of Psychosomatic Research, Vol.16, 1972, 173-178.

2 For the description of pain-colour scale and "Stewart's pain circles" see: Stewart, M.L., Measurement of clinical pain, IN Jacox, A.K. (Ed), Pain: A Source Book for Nurses and other Health Professionals, Boston, Little, Brown and Co., 1977, 107-137.

3 See for example: Parbrook, G.D., Steel, D.F. and Dalrymple, D.G., Factors predisposing to post-operative pain and pulmonary complications, British Journal of Anaesthesia, Vol.45, 1973, 21-32.

4 See for example: Loan, W.B. and Dundee, J.W., The value of the study of post-operative pain in the assessment of analgesics, British Journal of Anaesthesia, Vol.39, 1967, 743-750.

5 See for example: Woodforde, J.M. and Merskey, H., Some relationships between subjective measures of pain, Journal of Psychosomatic Research, Vol.16, 1972, 173-178.

6 For the discussion and examples of visual analogue scales see: Chapman, C.R., and Cox, G.B., Anxiety, pain, and depression surrounding elective surgery..., Journal of Psychosomatic Research, Vol.21, 1977, 7-15; Huskisson, E.C., Measurement of pain, Lancet, Vol.2, 1974, 1127-1131; Lasagna, L., The clinical measurement of pain, Annals of the New York Academy of Science, Vol.86, 1960, 28-37.

of pain, from "nil" to "agonizing". Most of the researchers since then have omitted the "agonizing pain" grade from the scale, arguing that such pain is rare (Huskisson, 1974; Scott and Huskisson, 1976), while others have used alternative verbal or numerical terminology. Lasagna (1960), for example, used a five point scale substituting "very severe" for Keele's "agonizing" category, while Ohnhaus and Adler (1975), used a 100mm-long horizontal line marked "no pain" at the left end and "unbearable pain" at the right end. A similar scale using a 100mm horizontal line was used by Glynn and Lloyd (1976), in their study of diurnal variation in pain perception. Chapman and Cox (1977), on the other hand, used a rating scale with a single item range from 0 (no pain) to 100 (unbearable pain).

Various studies mentioned here have concluded that visual analogue scales provide a sensitive measure of pain,[1] and show significant correlation with the clinical description of pain,[2] verbal rating scales,[3] and other measures such as vital capacity impairment.[4] In an extensive study of six different scales (see Fig 2.3), each tested with 100 consecutive outpatients with pain, Scott and Huskisson (1976) concluded that most patients could use the scales, even without previous experience, and that the most satisfactory results were achieved with a scale comprising a horizontal line with words spread out along the whole length of the line.

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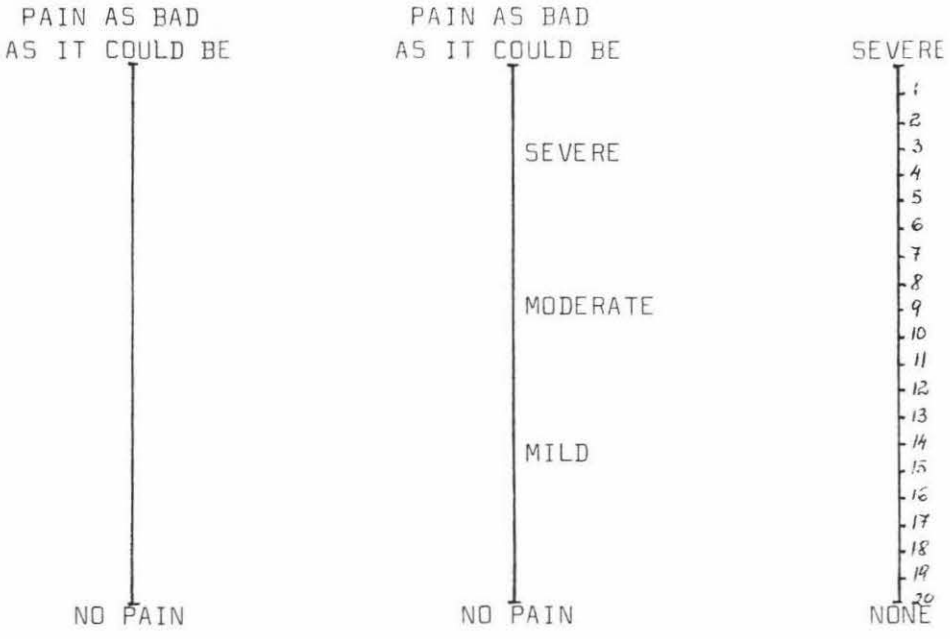
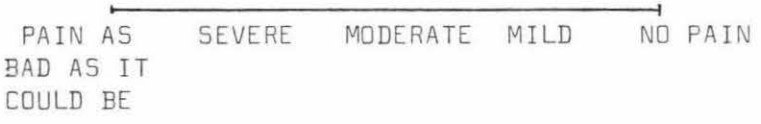
1 See for example: Huskisson, E.C., Measurement of pain, Lancet, Vol.2, 1974, 1127-1131.

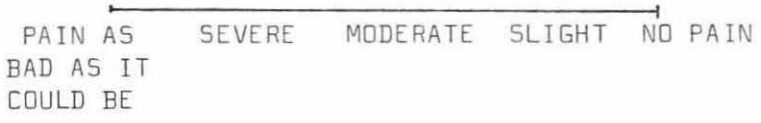
2 For a study comparing clinical descriptions of pain, analogue scales, and other methods of pain measurement, see: Woodforde, J.M. and Merskey, H., Some relationships between subjective measures of pain, Journal of Psychosomatic Research, Vol.16, 1972, 173-178.

3 See for example: Ohnhaus, E.E. and Adler, R., Methodological problems in the measurement of pain: a comparison between the verbal rating scale and the visual analogue scale, Pain, Vol.1, 1975, 379-384.

4 See for example: Parbrook, G.D., Steel, D.F., and Dalrymple, D.G., Factors predisposing to postoperative pain and pulmonary complications, British Journal of Anaesthesia, Vol.45, 1973, 21-32.







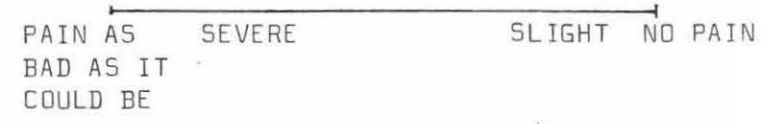


Fig 2.3 Six versions of a visual analogue scale tested by Scott and Huskisson (1976)

Other methods of measurement used in the study of pain have included the survey approach using structured or unstructured interviews (Jacox, 1979; Marks and Sachar, 1973), while some researchers have used a combination of interviews, behavioural observations and surveys of medication records (Bond and Pilowsky, 1966; Hayward, 1975). Pain rating scales have also been used in combination with anxiety and depression rating scales or inventories in an attempt to include psychological factors in the broader understanding of pain and suffering (Black and Chapman, 1976; Chapman and Cox, 1977).

More recently, there has been evidence of increasing interest in the "language of pain" with recognition of the fact that it is important to listen to the patient's description of what he is experiencing (Boyd and Merskey, 1978). In an attempt to combine evaluation of pain intensity with its other qualities, Reading and Newton (1978) have developed a card sorting method of pain assessment, using triads of words which reflect different qualities of pain and which have been rated on a five point scale for grades of intensity. So far, however, this method has been used only with Caucasian (in this case English) women experiencing pelvic pain, and the authors (Reading and Newton, 1978) recognize that other groups with other types of pain may use descriptive terminology different from that contained in their card set.

Another recent development in the area of pain evaluation and measurement has been the use of computers. Gerson and Gerson (1980), for example, have described a method of pain measurement using a visual analogue scale displayed on a computer screen and augmented by an audible component. While the approach has the advantage of using the computer, with the capacity to not only receive, but also store and reproduce information at a later date, the measurement component remains subjective.

SUMMARY

Literature dealing with definitions of pain points to the difficulties in defining what is ultimately a private and a subjective experience. Whether defined as a sensation, affect, or a broader

experience, pain is most often seen as unpleasant and as something being experienced and described in reference to the body. It is generally recognized that pain cannot be observed directly and many researchers, particularly in the nursing literature, have stressed the crucial role of the person experiencing the pain in defining what constitutes pain.

While distinctions have been made between inflicted and pathological pain, and somatogenic and psychogenic pain, many researchers maintain that for the normal experiencer all pain is felt as real and as unpleasant. In clinical practice, important differences have been identified between chronic and acute pain, not only in terms of differences in duration, but also in relation to accompanying behaviours, the effects on the sufferer, and the implications for treatment. Post-operative pain is seen as arising out of surgical trauma, and is usually regarded as acute and of short duration (lasting only a few days). Clinical studies suggest that not all surgical patients experience pain or require analgesic drugs for its alleviation. Reduction of stress and anxiety by pre-operative teaching or positive suggestion have been shown to affect the intensity of pain reported by patients. Nevertheless this is evidence that some post-operative patients experience considerable pain. In such cases one of the frequently identified causes for inadequate pain control is undertreatment with prescribed analgesics, particularly in relation to the frequency of administration of individual doses of medication.

Research literature points to two main components of the pain experience, the sensory and the reactive. The sensation of pain is difficult to isolate, however, except in some laboratory situations. While the evidence is inconclusive, there is a tendency to accept that pain perception threshold varies little in one individual over time, or between individuals. Pain tolerance threshold is said to be influenced by a number of variables including personality traits, age, and ethnic group membership. The relevance of laboratory findings (based on studies of inflicted pain) for clinical practice has been widely questioned. Clinical studies of pain stress the role of factors such as the significance or meaning given to pain, wound or illness, memory for pain, personality traits, and the organizational

setting in influencing the definition, behavioural response and coping style.

Laboratory studies of pain tolerance threshold show some differences between cultural groups, with people of northern European origin usually having higher scores than American Blacks, Orientals, southern Europeans, or people of Jewish background. Clinical studies point to more subtle differences of underlying attitudes and the significance ascribed to various types of behaviour.

Communication of pain is influenced by the sumbolic meaning of words and phrases used to describe pain. Different languages tend to reflect the values of the cultures of which they are a part. Verbal self-report is recognised as one of the most important indicators of pain.

Early studies of pain perception and pain tolerance thresholds have focused on the measurement of the strength and duration of the noxious stimulus. Clinical studies have tended to focus on the evaluation of the patient's pain by means of visual analogue scales, colour charts, verbal self-rating scales, and card-sorting methods. The researchers, however, acknowledge that whatever method is used to measure pain, such measurement is subjective since the experiencing person is the only one who can translate his experience to the researcher.

Chapter 3

STUDY DESIGN AND METHODOLOGY

> Methodology is fundamentally a matter of communication...part art, part logic, and part technology.
>
> (Després, 1968)

The purpose of this chapter is to describe the study's development and execution. The material is organized into four main sections. After the introduction of the research design, the second section discusses the principles of qualitative research, while the third section deals with the issues and problems of cross-cultural research. The fourth section, a description of the study, includes details and discussion of: (a) the data collection methodology; (b) the pilot study; (c) the setting for the study; (d) the patients who took part; and (e) a brief outline of the methodology of data analysis.

RESEARCH DESIGN

The design of this study has been shaped by a particular orientation to research and theory building in nursing. It is accepted by the researcher that considerable progress has occurred (over the last 10-15 years) in the area of nursing theory development. Nevertheless, there is still a dearth of formal theory in nursing. For this reason, the logico-deductive model of scientific research was not considered to be the most appropriate way of approaching the problem. The phenomenological approach and perspective adopted allows for the formulation of theory as an integral part of the research process; the data which describe the reality are collected and analysed while, at the same time, concepts and categories are formed as a first step in theory building. This type of orientation has emerged in many fields of the social sciences and will be discussed further. The point which needs to be appreciated at this stage is that because of the approach used, the

design of the study differs from the traditional positivistic approach. Firstly, there is no formal, theoretical framework which would dictate the type of concepts to be considered or data to be collected. And secondly, there are no hypotheses, developed in advance, to be tested by the research. Rather, the research described in this report, involves a qualitative study of surgical patients from two different cultural backgrounds in which the patients, through observation, interviews, verbal self reports and visual analogue scales, provide information about their experience of pain. It was this information (gathered in the process of data collection) which helped to create categories for data analysis and which also helped to develop the 12 study questions around which the discussion of findings is organised. Before the details of the study are described, an outline of the qualitative approach in social science research will be provided.

QUALITATIVE RESEARCH

Filstead (1970, 6) defines qualitative methodology in social science research as follows:

> ...those research strategies, such as participant observation, in-depth interviewing, total participation in the activity being investigated, field work, etc., which allow the researcher to obtain first-hand knowledge about the empirical world in question.

The basic tenet of such an approach is that explanation stems from the data itself rather than preconceived, rigidly-structured techniques constructed before hand. The notion of explanation (and therefore theory) being derived from, or "grounded" in, data has been particularly well developed by Glaser and Strauss (1967, 1970, 1971). Rather than treating qualitative research as merely a preliminary step to quantitative research (in the sense that such preliminary studies may yield important questions or focus on significant areas for study), Glaser and Strauss suggest that qualitative research should be seen as a strategy for the discovery of substantive theory. In other words, "the formulation of concepts and their interrelation into a set of hypotheses for a given substantive area - such as patient care, gang behaviour, or education - based on research in the area" (Glaser and Strauss, 1970, 288). The authors point out that such substantive theory

can lead to formal theory (i.e. theory developed for a formal or conceptual area of sociological inquiry such as stigma or socialisation) but both levels of theory must be grounded in data (Glaser and Strauss, 1967). The central feature of this approach is the joint collection and analysis of data so that important concepts and basic categories are identified in the early stages of research and further data collection takes its direction from provisional analysis as the result of which barren data and hypotheses are pruned away while significant ones may be developed further (Becker, 1970; Glaser and Strauss, 1970). The prime concern of this type of research therefore is to generate new theory, rather than to test existing theories.

If one accepts the contention that there is a dearth of formal theory in nursing and that theory in the related social sciences is also not well developed (Roy and Roberts, 1981), then it may be seen that there is considerable merit in the formulative research which leads to what Glaser and Strauss (1967) have called "grounded theory". As the data collection process continues, low-level categories give way to more comprehensive and integrated classification schemes. As a result, the theory produced will fit the data, but it will also need further testing, clarification, and reformulation. Glaser and Strauss (1970) stress the need for further rigor in the testing and refinement of the theory, but suggest that while this may well involve quantitative studies, in other cases qualitative methods may well be both more appropriate and more rigorous.

Glaser and Strauss, however, are not isolated in their preference for qualitative research. Workers in fields other than sociology have adopted similar approaches. In both psychology (Gauld and Shotter, 1977) and anthropology (Watson-Franke and Watson, 1975) there are advocates of the "hermeneutical" approach to social research. Within such a perspective, research is seen as an essentially interpretive process in which meanings evolve and change during the process of interaction between the researcher and the subjects. The stress is always on "understanding in context", as opposed to "preunderstanding"(i.e. the preliminary ideas and expectations the researcher has at the beginning of a research project).

There are two central themes in the hermeneutical approach - the relationship between a whole phenomenon and its components, and the role and character of questioning in the process of research. In relation to the former, the Gestalt principle (that structured phenomena are more than the sum of their components) is recognised and utilized. Watson-Franke and Watson (1975) therefore suggest that it is possible and desirable to enlarge the context of enquiry, or to break out of the context, depending on the emerging understanding resulting from the research process. The second theme of hermeneutics is the special role and character of questioning which takes the form of a dialogue with the exchange of ideas and actions, both verbal and non-verbal. The questioning is essentially dialectical, as opposed to methodical questioning of quantitative research which, as the authors suggest, tends not to call into question its own guiding presuppositions (Watson-Franke and Watson, 1975). The hermeneutical approach advocates participation in the culture being studied in order to obtain clearer understanding of the context from which data are extracted, as well as the need for periodic withdrawal in order to reflect and assemble insights.

In the area of educational research, Bullivant (1978) proposes a neo-ethnographic approach which rejects the purely quantitative positivistic approach, but at the same time tries to go beyond the traditional anthropological approach of personalized field work. Since part of the research task is to "...uncover the participants' rules for applying the meanings, labels and understandings that constitute for them an undoubted reality" (Bullivant, 1978, 242), there is a need for what the author calls the interpretive paradigm in which pre-existing norms and roles are not accepted. Rather, the researcher needs to interpret situations and create or modify roles, while the focus is phenomenological and social-interactionist, stressing the meanings as well as behaviours.

The neo-ethnographic approach proposed by Bullivant suggests that methodology is fundamentally a matter of communication, and therefore, "...part art, part logic, and part technology" (Després, quoted in Bullivant, 1978, 242). The research techniques used revolve around "supplemented participatory-observation" and "dialectical questioning", but may also include psychological tests, set projects,

and other techniques. The aim of such research is to generate grounded theory, i.e. the inductive formation of substantive, middle-range theory based on ethnographic data.

In the present study, a form of supplemented participatory-observation was used, with the nature of questions asked and the data collected being allowed to change during the process of research. In particular, none of the interviews utilized the methodical questioning of a structured format. Rather, while certain themes were always covered during interviews, the order and wording of questions differed from patient to patient and from one time period to another.

Since participant-observation is included in all examples of the qualitative approach discussed above, and is central to the present study, it warrants a closer examination at this stage. To begin with, it may be helpful to consider participant-observation at three different, but related levels (Pearsall, 1970), i.e. as a special, definable role; as a set of techniques; and as a type of theoretical orientation.

Bruyn (1966), has suggested that participant-observation as a role is seen as a set of behaviours in which the researcher is involved as:

(i) complete observer, i.e. without participating in any active way in the situation being observed (except perhaps in large crowds, such a version of the role is difficult to carry out);

(ii) complete participant, e.g. playing the role of a nurse or patient, at times without the knowledge of others involved in the situation. Sullivan et al (1970), for example, report a study of a military training programme in which the observer "enlisted" as a basic trainee so that even his commanding officer was not aware of his true role. Such a role, however, is always in danger of exposure and would be considered unethical by many.

(iii) observer-as-participant and participant-as-observer involve a type of role in which both the observer and the observed are aware of their special relationship. But while the

researcher becomes involved with other participants in the situation, at the same time he always remains something of an outsider.

Pearsall (1970), suggests that a nurse in the role of a participant-observer has particular advantages when conducting research in health care facilities, because of the background knowledge and familiarity with settings which for other researchers may present a "culture shock". At the same time, the nurse may be tempted to become a total participant, or to overcompensate by rigid adherence to an observer role. In any situation, the participants need to be given sufficient time and opportunity to get to know the observer, preferably while the observer is engaged in highly visible but non-threatening activities.

Participant-observation as a set of techniques involves carrying out observations, planned for a specific purpose, recorded on a permanent form, and subjected to checks and controls. It also involves interviewing, particularly in order to collect data related to beliefs, values, attitudes, norms and statuses (Zelditch, 1970). Participant-observation as methodology, on the other hand, requires that "role and technique serve the interests of organising, classifying, and analysing data in terms of some theoretical problem" (Pearsall, 1970, 347). The participant-observer shares in the life activities and sentiments of people in face-to-face relationships and by doing that he ultimately aims to see "life as it is being lived...with the smallest amount of disruption to the lives of the people being studied" (Edgerton and Langness, 1974, 32). Participant-observation also allows for checks on whether or not information obtained through interviews or other means reflects reality or is distorted, thus lessening the amount of inference while increasing both the accuracy of data collected and the possibility of new insights and discoveries (Becker and Geer, 1970).

In the present study, the researcher assumed the role of observer-as-participant and spent six to ten hours each day in non-structured social interaction with the patients and staff of the surgical units included in the study. Most of this time was spent in interaction with individual patients, with occasional participation in patient-care activities such as assistance with ambulation or hygiene tasks. The

researcher did not, however, participate in decision-making or active treatment related to administration of analgesics or other medication. The approach allowed the researcher to verify the data collected through interviews and other techniques (such as the verbal self reports) and to utilize the medical and nursing records to supplement information gained through participant observation. The approach also allowed the researcher to be an active component of the patients' experience, recognising that her presence contributed to the way patients perceived and responded to that experience. At the same time, it allowed the researcher to freely admit a degree of subjectivity in the process of data collection and analysis, as an integral part of the research process.

ISSUES AND PROBLEMS OF CROSS-CULTURAL RESEARCH

This study, as well as being a qualitative investigation of patients in pain, is a cross-cultural study involving patients from Anglo-Australian and Yugoslav cultural backgrounds. Cross-cultural research, however, is beset by a number of special problems which must now be discussed.

As demonstrated in the work of Zborowski (1952, 1969), cross-cultural research (in which two or more groups of subjects each with a different cultural background are compared) can make a significant contribution to our understanding of human behaviour, by correcting myths and stereotypes and reducing ethnocentric generalizations. Moreover, as pointed out by Rohner (1977), it contributes by stressing not only the differences but also similarities between groups, thus laying the basis on which generalizations and formulations of laws of human behaviour can be built.

Most cross-cultural research has been said to be descriptive in character, and to suffer from one major weakness; namely, that with this type of research it is difficult to choose among alternative explanations for the variables found (Sechrest, 1977). The problem is accentuated by the lack of personality and attitude scales which have been adequately tested in cross-cultural contexts. Such scales are difficult to translate, and when translated do not necessarily test the

same variables as the original. Guthrie (1977) agrees with Sechrest's analysis of the situation and suggests that there is a need for cross-cultural research to not only describe, but to go a step further and ask how the differences relate to cultural processes.

The formulative research advocated by Glaser and Strauss (1967), is particularly suited to cross-cultural studies, since it relies greatly on comparative analysis and rather less on experimentation or statistical analysis. In order to clarify and refine theory, these authors suggest comparisons between many rather than just a few groups, including comparisons between culturally diverse groups.

Zborowski's (1969) findings, outlined previously (i.e. that similar reactions to pain do not necessarily reflect similar attitudes, nor do they necessarily serve the same functions or purposes in different cultures), stress the need to go beyond observable behaviours. This is necessary in order to examine what Triandis (1977) calls the subjective culture (i.e. the norms, roles, perceived consequences of behaviour, values, expectations and attributions made by the members of different cultural groups as to the causes of behaviour). Participant-observation, supplemented by in-depth interviews and dialectical questioning (Bullivant, 1978, and others) would therefore seem to be the most appropriate way of approaching research in this area. Such an approach is, of course, beset by a number of practical problems - language for effective interaction, unwanted variables and acceptance of the observer-participant by the subjects studied.

First, where the researcher is monolingual the problem of translation features prominently in cross-cultural research. Direct equivalents of words are not as common as dictionaries may suggest (Wagatsuma, 1977), and there is also the need to consider equivalence in idiom, in grammar and in syntax (Sechrest et al, 1972). Bilingual skills, which allow for presentation of verbal stimuli, explanations and instructions in either language (when two are involved) and the analysis of responses prior to translation, may lessen the problem to some extent (Sechrest, 1977; Wagatsuma, 1977).

Second, there is also the problem of controlling for unwanted variables, i.e. "any factors which interfere with meaningful comparisons

and conclusions in cross-cultural research" (Sargent, 1977, 712). Among the most common of these may be the age, sex, and socio-economic status differences between groups, as well as communication problems and the researcher's motivation and bias. At least part of this problem may be overcome by the use of matched samples. Where possible, the matched pair method is advocated, or alternatively, frequency matching (where identity of the pairs is not preserved, but the groups are still considered comparable) along those characteristics which may be expected to affect the response variables (Billewicz, 1964).

Finally, where the researcher proposes to become a participant-observer, particularly in cross-cultural studies, he may encounter difficulties either as a member of the dominant group conducting research among minorities, or as a member of a minority group. Maykovich (a Japanese-American female sociologist), points to the changing nature of social distance in her study of Japanese-American and Canadian Mennonite communities. In the early stages her physical similarity, language and first name together produced a sense of ethnic identification for the Japanese-American subjects. They expressed feelings of obligation to help "one of their own" and exhibited greater interest in the researcher as a person than in the research itself. Later, however, they tended to reject her since she was seen to be espousing values of the dominant group. The Mennonites, on the other hand, initially saw her as a total stranger, but in the latter stages expressed curiosity with greater sharing of ideas and feelings and (in some cases) the development of friendship (Maykovich, 1977). Thus, while ethnic identification and common language can help by making communication easier, they may also hinder research, particularly if the researcher is not aware of the potential difficulties.

In the present study, the bilingual skills of the researcher were seen as an advantage, allowing the interaction between the researcher and patients to be conducted in a patient's language of preference. The visual analogue scale was also prepared in both languages, allowing Yugoslav patients the choice of the English or the Serbo-Croat version. At the same time, the recording and analysis of data did not require prior translation, so that all the information was analysed in its original language.

The problem of matching the patients in the study group will be discussed in the section of this chapter dealing with the description of the subjects. In relation to the problem of the participant-observer being identified with either the dominant or the minority group, it was recognised that difficulties could arise in this area. Since one cannot change one's identity, however, there was little that the researcher could do except to be alert to the possibility of problems arising. In the end, however, no difficulties were experienced. In the researcher's opinion, this was partly due to the fact that the researcher was seen as a New Zealander as well as coming from a Yugoslav background, but in the main it was probably because the researcher was seen as a nurse, doing nursing research in which the focus was on the implications for patient care rather than comparison between different cultural groups.

DESCRIPTION OF THE STUDY

The study took place over a period of twelve weeks, in January-February and May-June of 1980. It was an exercise in participant-observation involving a total of approximately 600 hours spent in the field, most of it in direct patient contact. In addition to participant observation records, a number of other types of information was obtained for each patient, as described below.

Methodology of data collection

A programme of data collection was prepared and tested in a small pilot study, and consisted of the following elements:

(A) On the day prior to surgery:

(1) A non-structured, in-depth interview. This was designed to meet the patient; to allow the patient to decide about participation in the study; to develop a degree of rapport with the patient; to obtain biographical information, and as much as possible of the patient's expressions of feelings and thoughts related to the experience of hospitalization, surgery, and pain. This baseline data helped in the evaluation of changes in the patient's behaviour post-operatively.

(2) Behavioural observations (see Appendix 2) were also recorded at this time. The patient was instructed in the use of the visual analogue scale (see Appendix 3) and was asked to provide the first subjective pain evaluation by this means, as well as a verbal self report (see Appendix 4) of pain, morale, and other feelings. Participant observation having started, other relevant data were also recorded (see Appendix 5).

(B) On the day of operation:

Depending somewhat on the scheduled time of surgery most patients were seen prior to going to surgery (mainly to maintain contact). In some cases where surgery was scheduled for late afternoon, patients made a request that the initial interview be conducted during the morning (to help pass the time) and usually this was done. Following surgery, circa 3-6 hours after the patient's return from the operating room, participant-observation resumed, and technical data related to surgery were recorded (see Appendix 6). No attempts were made to obtain verbal information from patients.

(C) Day one to day five post-operatively:

As much time as possible between 8.30 am and 6 pm was spent in participant-observation. At times it was necessary to extend this until 8 pm or later, particularly when more than 4 or 5 patients were in the study concurrently and in order to ensure that adequate time was spent with each patient. Once each day (usually in the late afternoon) behavioural observations, verbal self report, and subjective pain evaluation using the visual analogue scale were recorded. Participant-observation was then continued for the duration of the patient's stay in hospital.

(D) On the day prior to discharge:

Behavioural observations, verbal self report and subjective evaluation of pain by means of the visual analogue scale were repeated, and the second interview was conducted. This interview was designed to allow patients to evaluate their experience retrospectively, to fill in gaps in the previously

obtained information, and to clarify the investigator's understanding of patients' behaviours and attitudes. The second interview, while allowing patients to "dictate the agenda" to a certain extent, was structured to some degree in that where the patient did not bring up some issues spontaneously a number of possible questions were asked directly (see Appendix 7).

With the patient's consent, the two interviews were recorded on an audio tape recorder, while all other information was recorded in writing. In order to encourage more spontaneous expression and greater freedom in speaking "off the record", the introductory part of the first interview and the last part of the second interview were not taped and this was made clear to the patients. The type and amount of analgesia received by each patient was compiled from the patient's records (see Appendix 6). A summary of the data collection programme for each patient is provided in Fig 3.1 below:

Day of study	1	2	3	4	5	6	7		8
	Intro-duction								
	Inter-view (A)	PO	PO	PO	PO	PO	PO	PO	PO
	BObs		BObs	BObs	BObs	BObs	BObs		BObs
	VAS		VAS	VAS	VAS	VAS	VAS		VAS
	VSR	TI	VSR	VSR	VSR	VSR	VSR		Inter-View (B)
	PO								VSR
Post-Op. days	-1	0	1	2	3	4	5		Day prior to discharge

Fig 3.1 DATA COLLECTION PROGRAMME

Key for Fig 3.1

BObs = Behavioural Observations
VAS = Subjective pain evaluation using Visual Analogue Scale
VSR = Verbal Self Report of pain, morale, and other feelings
PO = Participant Observation
TI = Technical Information (type of surgery, drains, catheters, etc.)

In order to obtain informed consent, and to ease communication (and hence to obtain more reliable responses), the consent form (Appendix 1 and 1a) and the visual analogue scale (Appendix 3 and 3a) were prepared in both English and Serbo-Croatian. Throughout the study verbal interaction was conducted in the patient's language of preference, i.e. English with all Anglo-Australian and two Yugoslav subjects and Serbo-Croatian (with phrases in Macedonian when appropriate) with the remainder of the Yugoslav sample.

Statement of the study questions and the hypothesis

Prior to the commencement of data collection a list of study questions was compiled (see Appendix 8). In line with a qualitative approach, however, the questions were amended and modified both during the pilot study and during the study proper. The following is a list of questions that evolved:

(1) What fears or concerns do patients have before surgery, and does pain or fear of pain feature among these?

(2) What is the duration of post-operative pain following abdominal surgery?

(3) What intensity of pain do patients experience post-operatively, and during which period do patients experience the greatest intensity of pain?

(4) What is the quality of the pain experienced, and how do patients express the qualitative characteristics of pain?

(5) What behaviours do patients in pain exhibit, and what underlying attitudes can be identified for such behaviour?

(6) What pain, other than that related to the surgical incision, do patients experience? What are patients' responses to such pain?

(7) What attitudes do patients have towards pain-relieving drugs and the frequency with which these are administered?

(8) What is the perceived effect of analgesia and the overall estimation of its adequacy by individual patients?

(9) Which measures or activities, other than drugs, do patients perceive as helpful in the relief of pain?

(10) What preferences do patients express with regard to the presence or absence of others (staff, friends, family) while experiencing pain?

(11) How closely does the experience of this surgical operation relate to the patient's pre-operative expectations? If disparity occurs, what reasons are given for the disparity between the expectations and the actual experience, and to what extent does pain feature as a reason for such disparity?

(12) What do patients perceive as the most positive and the most negative aspects of their experience of hospitalization and surgery, and does pain or its alleviation feature among these?

As a result of observation and comparative analysis, one general hypothesis was formulated as follows:

That while some behavioural differences exist between Anglo-Australian and Yugoslav patients, the greatest degree of difference between the two groups is found in their underlying attitudes to pain.

Definition of terms

Pain is an unpleasant experience which we primarily associate with tissue damage and/or describe in terms of such damage. Pain produces behaviour aimed at communicating its presence or stopping the conditions producing it.

Attitude is a combination of feelings, beliefs, and tendencies to act in particular ways. It is emotionally toned and relatively persistent.

Behaviour refers to those activities of a person that can be observed by another person, or by an investigator's instruments. It can include verbal reports made about subjective, conscious experiences.

(i) Pain-related motor behaviour refers to physical behaviours such as facial tenseness, restlessness, hand clenching, rigid body posture, and sweating which may be indicative of pain.

(ii) Pain-related vocal behaviour refers to sounds such as moaning, groaning, grunting, crying, or screaming which may be indicative of pain.

(iii) Pain-related verbal behaviour refers to linguistic expressions including cursing, pleading, complaining, talking about pain and asking for help which may be indicative of pain.

(iv) Pain-related social behaviour refers to other-directed behaviour such as social withdrawal, changes in communication, changes in social manners, changes in personal appearance, or clinging behaviour which may be indicative of pain.

Pain Experience refers to the totality of the cognitive and feeling states, physiological reactions, and behavioural responses made by the person conscious of suffering pain.

Surgical Patients are those persons who have during the period of this study undergone a surgical procedure requiring an abdominal incision in order to facilitate inspection, repair, or removal of organs or tissues contained in the abdominal cavity or wall.

The pilot study

A small pilot study was conducted to test the feasibility of the proposed research. Subjects for the pilot study were four female patients admitted to a district hospital in New Zealand for abdominal surgery. The researcher was involved in twelve days of participant-observation, the aims of which were:

(1) to assess the patients' ability to use the visual analogue scale and the time and approach needed to instruct patients in the use of the scale;

(2) to assess the response of ward staff to the presence of the investigator and her involvement with selected patients;

(3) to assess the investigator's ability to develop rapport with the selected patients in the limited time available, and to elicit the quality of information needed for the success of the study;

(4) to assess the investigator's capacity for involvement with several patients at different stages of recovery in terms of time and energy required;

(5) to assess the capacity of the selected research tools to obtain the type and quality of information needed;

(6) to examine the applicability of the proposed study questions and allow for their clarification in the real situation and to allow for new questions to arise out of the pilot study.

One outcome of the pilot study was that the researcher identified a number of sensitive issues. These were as follows:

(i) The need to be relaxed and unhurried in dealing not only with the subjects in the study, but also with other patients sharing the same room.

(ii) The need to spend some time with or around the selected patient before starting the first interview. Patients not only became more relaxed and therefore provided information of a higher quality, but also commented later that they appreciated not being hurried.

(iii) The need for a quiet room in which to conduct interviews ensuring privacy for the patient and adequate quality of audio recordings for the investigator.

(iv) The need for adequate rest and sleep for the investigator, to ensure alertness and sensitivity in recognising some of the more subtle cues provided by the patients. For this reason, attempts to visit each patient prior to the transfer to the operating theatre, particularly in the early morning, were abandoned. Similarly, while written observations were analysed and added to daily, attempts to transcribe recorded interviews late in the evenings were abandoned for the duration of the data collection.

On the other hand, it was found that collecting data from four patients concurrently was well within the investigator's capacity, and no difficulties were experienced in gaining the consent of patients to participation in the study or to the use of the tape recorder. None of the patients showed reluctance or difficulty in using the visual

analogue scale although they had never used it before. Instruction in the use of the scale was given at the end of the initial interview and required only a few minutes.

In relation to the staff's response, it was found that given adequate explanation most were happy to cooperate. The investigator's explanation stressed the fact that the study was attempting to focus on the patients' subjective experience and not the staff's activities. Throughout the study the explanations given presented the study as looking at post-operative recovery, including the experience of pain, rather than a study of pain within the context of post-operative recovery. The difference between the foci is significant and the former was used for two reasons. Firstly, to reduce the possibility of patients experiencing more stress or anxiety as the result of their participation in the study. It was believed that this could have been the case had the patients perceived my primary interest to be pain. Secondly, it was essential that the staff continue to act "normally" in their interactions with the patients. Any increased attentiveness to pain and its treatment on the part of the staff would have changed the situation and thus interfered with the investigation. The pilot study helped to confirm earlier feelings that this was necessary in order to disrupt as little as possible the usual environment of the surgical wards. The importance of this for clinical research is well recognised in the literature (Rubin and Erickson, 1978).

Description of the setting for the study

The decision to undertake the study in Australia was made following a short, exploratory visit to Sydney in August 1979. Since individual hospitals do not compile information about the ethnic background of their patients, the investigator had to be guided by nursing and medical administrators and their impressions of the likely numbers of surgical patients from various ethnic backgrounds. The Royal Prince Alfred Hospital in Sydney was selected as it is a large metropolitan hospital with over 1400 beds and caters mainly for short-stay medical and surgical patients. The hospital is also situated in an inner city area which has a large migrant population, primarily of Yugoslav origin (Winter, 1979). It was anticipated that sufficient numbers of patients of both Yugoslav and Anglo-Australian backgrounds would be available for the study in this one hospital

during a data collection period of 6-8 weeks beginning in early January 1980.

Patients who were included in the study came from seven different units including general surgery (men's and women's wards), urology, and gynaecology. Since the hospital admits both public and private patients both categories were included in the study. A total of 27 patients met the criteria and were approached as regards participation in the study. While two (both Anglo-Australian females) declined to take part in the study and another three (two Anglo-Australian females and one Yugoslav male) were lost due to cancellation of surgery or early discharge, 22 patients, including 12 Anglo-Australian females, five Anglo-Australian males and five Yugoslav females, were included in the study over a period of seven weeks.

As a result of the small numbers of Yugoslav patients found to be available for the study in the Royal Prince Alfred Hospital, approaches were made to several other Sydney hospitals to ascertain the availability of Yugoslav patients in other localities. None of the hospitals in the inner city or the western suburbs gave encouraging replies, however. Therefore, further patients were located outside the Sydney area, in Wollongong, as the indications provided by senior nursing administrators suggested that patients of Yugoslav background made up a larger proportion of the total patient population there. (The steel and other heavy industry in the area has long attracted migrants from Yugoslavia, particularly Macedonia, as labourers and tradesmen).

Wollongong Hospital, with 340 beds, is the largest hospital in the area and provides services for most acute referral cases. Patients for the study were drawn from two surgical wards of this hospital. Port Kembla District Hospital has some 150 beds and also caters mainly for acute medical and surgical patients. Patients from two surgical wards of this hospital were also included in the study. Since the data collection was carried out concurrently at the two hospitals, two or more trips each day were required between the hospitals - a distance of 10 kilometres. This was accomplished by means of the Port Kembla Hospital car on its routine courier trips, public transport and taxi service. Thus it was possible to spend at

least two observation periods each day with the patients at both hospitals.

During the second period of data collection, which lasted for five weeks (May-June 1980), 11 patients met the required criteria and were included in the study. This group included three Anglo-Australian males, seven Yugoslav females and one Yugoslav male. There were no refusals to participate, and no losses from the study. Thus a total of 33 patients took part in the study and their distribution according to hospital, ethnic background and sex is shown in Table 3.1 below.

TABLE 3.1 Distribution of Patients According to Hospital, Ethnic Background and Sex

	Anglo-Australians		Yugoslavs		Total
Hospital	Male	Female	Male	Female	
Royal Prince Alfred	5	12	0	5	22
Port Kembla District	1	0	0	3	4
Wollongong	2	0	1	4	7
Total	8	12	1	12	33

As already mentioned, 11 surgical wards in three different hospitals provided the patients for the study. Only one ward was "mixed", having both female and male patients, while the remainder catered for either male or female patients but not both. The size of the rooms occupied by patients varied from single and two-bed rooms to eight-bed rooms in nine of the wards, while the remaining two were traditional "Nightingale" types with beds lined down both sides of the open ward with one or two single rooms close to the nurses' office.

The nursing staff in all wards consisted of a Charge Nurse (Ward Sister) and between one and six Staff Nurses (Staff Sisters). Although a few Hospital Aids (Nurse Aids) were encountered, the bulk of patient care was provided by student nurses who appeared to be the most numerous but also the most transient members of the ward staff. This last factor, and the continuing daily contact the investigator had with all patients in the study, had a particular

bearing on patient comments about their participation in the study.

Description of patients included in the study

While it is recognised that much social science research is dependent on the rigorous quality of the sampling employed, this is not always the case. Daniel and Longest (1977), for example, suggest that at times probability sampling is difficult and expensive. When certain types of information about a population (e.g. 'ethnic background') are not readily available, probability sampling can be especially difficult. It is well recognised that it is rare to have a randomly-selected population in clinical research (Rubin and Erikson, 1978), nor is a random sample seen as essential or even necessary for valid research (Brislin and Baumgardner, 1971). The formulative research advocated by Glaser and Strauss (1967) specifically negates the need for rigor in sampling and statistical analysis which is seen as a cornerstone of good research by others. Zborowski (1969, 13), referring to cross-cultural research, offers support for this view, particularly when he quotes Margaret Mead (the anthropologist) as stating that,

> careful sampling technique is not necessary to study cultural manifestations or patterns because any member of a group, provided that his position within that group is properly specified, is a perfect sample of the group wide pattern.

The approach in this study has been to accept all patients who met the criteria for inclusion in the study as they presented at the hospital, and to continue including such patients until the quota for their particular category had been reached. To be included in the study patients were required to meet the following criteria:

(1) Age - that they be adults between 20 and 70 years of age.

(2) Cultural background -

  (i) that they be persons who are at least second- or third-generation Australians of British or North European stock (the "Anglo-Australians"), or

  (ii) that they be first-generation immigrants to Australia of Yugoslav origin (the "Yugoslavs").

(3) Nature of hospitalization - that they are clearly identifiable as non-emergency admissions for previously arranged surgery.

(4) That they should have no recent history of psychiatric illness.

(5) That they should agree to participate in the study.

The aim of the above criteria was to ensure, as far as this is possible, similarity between the two groups along other than the predictor variables. General abdominal surgery was chosen (in preference to other types of surgery or other illness conditions) since it usually entails a relatively short period of immobilization, pain and hospitalization. Thus patients could be expected to experience some degree of pain in most cases but also to be ready to reflect on their experience by the time of their discharge from hospital. Patients admitted for emergency surgery were excluded since it was felt that such patients were likely to be in some degree of pain or distress thus making the initial interview difficult to conduct as well as possibly adding to the patient's distress. In addition, the period between hospital admission and surgery could be expected to be relatively short and the researcher would be competing for the patient's time with staff engaged in patient assessment and preparation for surgery. Similarly, it was felt that patients with recent psychiatric illness should be excluded since the nature of their perceptions and behaviour could be influenced by their illness making them less tolerant of pain and anxiety (Hayward, 1975). And finally, adults 20-70 years of age were selected with those below the age of 20 and over the age of 70 excluded primarily to control for possible differences in pain tolerance attributable to age (Woodrow et al, 1972).

In spite of earlier planning, the target of 30-40 patients (set before data gathering began) was only partly reached since the aim was to include similar numbers from each cultural group with equal distribution between males and females. As illustrated in Table 3.1 (p.64), the Anglo-Australian group included 20 patients 12 of whom were female and eight male, thus meeting the original target. On the other hand, while 12 female patients were also included in the Yugoslav group, only one male patient was found.

Given the constraints of both time available and the characteristics of patients qualifying for inclusion in the study group, attempts to match the two culturally different groups for age, sex and socio-economic status were not entirely successful. Since only two Yugoslav males hospitalized during the study period qualified for inclusion in the study group, and one of the two was discharged when his surgery was postponed, Yugoslav males are grossly underrepresented.

The two groups are, however, relatively well matched for age with Anglo-Australian females ranging in age from 23 years to 59 years and a mean of 35 years. The range for Yugoslav females was from 20 years to 51 years with a mean of 35.5 years. The Anglo-Australian males tended to be considerably older with an age range from 20 years to 65 years and a mean of 52.2 years, with only two males under the age of 50 years. The one Yugoslav male was 66 years of age. The distribution of patients according to age, ethnic background and sex is summarized in Table 3.2.

TABLE 3.2 Distribution of Patients according to Age, Ethnic Background and Sex

Age (in years)	Anglo-Australians		Yugoslavs		Total
	Male	Female	Male	Female	
20 - 29	1	6	0	3	10
30 - 39	0	3	0	4	7
40 - 49	1	2	0	4	7
50 - 59	4	1	0	1	6
60 - 69	2	0	1	0	3
Total	8	12	1	12	33

Two indicators of socio-economic status were used, namely the general level of education attained, and the current employment category. As illustrated in Table 3.3 the majority of the patients had undertaken at least some secondary schooling, but while 10 percent of the Anglo-Australian group also had some tertiary education none of the Yugoslavs had. In addition, almost a third of the Yugoslav group had only primary school education as compared with only 5 percent of the Anglo-Australian group.

TABLE 3.3 Distribution of Patients according to Level of General Education and Ethnic Background

Level of Education	Anglo-Australians		Yugoslavs		Total	
Primary only	1	5%	4	30.8%	5	15.2%
Secondary	17	85%	9	69.2%	26	78.8%
Tertiary	2	10%	0	0%	2	6%
Total	20	100%	13	100%	33	100%

In terms of their current occupation, patients were classified according to the 16-category Occupation Code developed at the Australian National University and used by Burnley (1975). However, because of the small size of the study group the 16 categories were reduced into three levels - the top five categories (Level 1); the middle five categories (Level 2); and the lowest six categories (Level 3). As illustrated in Table 3.4, the two groups differ significantly in that more than three times as many Anglo-Australians than Yugoslavs fall within the top occupational level, while the Yugoslavs are heavily concentrated in the lowest occupational level.

TABLE 3.4 Distribution of Patients according to Occupational Level and Ethnic Background

Occupational Category	Anglo-Australians		Yugoslavs		Total	
Level 1	5	25%	1	7.7%	6	18.2%
Level 2	8	40%	3	23.1%	11	33.3%
Level 3	7	35%	9	69.2%	16	48.5%
Total	20	100%	13	100%	33	100%

It is worth noting that while there are differences between the Anglo-Australians and the Yugoslavs in the study group, each subgroup is very similar to its population of origin, as evidenced by results from the 1966 Census for Sydney (Burnley, 1975).

While the qualitative research approach may be seen to minimise the importance of random sampling it does require that the subjects selected be well described, so that the context from which

conclusions are drawn is defined and others wishing to make comparisons have definite points of reference (Brislin and Baumgardner, 1971). The following section will therefore provide basic information about the study group in relation to marital status, religion, community of origin, previous experience of hospitalization and surgery, and the type of operation for which admitted. Since no attempts were made to control for any of these intervening variables data relating to them are presented for the total study group, except where the question of ethnic background is of some relevance.

In relation to marital status, the majority of patients (78.8 percent) were married, 15.2 percent were single, and 6.1 percent divorced. In this respect the two groups were very similar. Cultural differences, however, were reflected in the stated religion. While more than half of the Anglo-Australians indicated their religion as Protestant, the majority of Yugoslavs (69.2 percent) identified themselves as Orthodox. The distribution according to the stated religious affiliation is shown in Table 3.5.

TABLE 3.5 Distribution of Patients according to Religion and Ethnic Background

Religion	Anglo-Australian		Yugoslavs		Total	
Protestant	12	60%	1	7.7%	13	39.4%
Roman Catholic	6	30%	3	23.1%	9	27.3%
Orthodox	0	0%	9	69.2%	9	27.3%
No religious affiliation	2	10%	0	0%	2	6%
Total	20	100%	13	100%	33	100%

In relation to community of origin, most of the Anglo-Australian group came from Sydney or its vicinity, and while three came from outside of New South Wales only three were born and still lived in the rural area. The Yugoslavs, on the other hand, came predominantly from rural areas. They also came from different geographical areas of Yugoslavia, with five from Macedonia, three from Serbia, two from Bosnia, two from Croatia, and one from Slovenia.

Most of the Yugoslavs had migrated to Australia as young adults (i.e. between the ages of 20 and 30 years). Only one subject was under 10 years and only one over the age of 40 years on arrival in Australia. Their length of residence in Australia varied from five years to 32 years, with a median at 10.3 years and the mean at 12.4 years.

In relation to previous admissions to hospital, only one patient had not had a previous experience of hospitalization, while the highest number of admissions for any one patient was eight. The average (mean) for the total group was 3.1 with Anglo-Australian females having an average of 4.0 previous admissions, and Anglo-Australian males and Yugoslav females an average of 2.6 previous admissions to hospital. Similar trends were apparent in relation to previous surgery with Anglo-Australian females again showing the highest average number (2.8 operations). The average for the total group was 2, with four patients who had not had previous surgery and a large group (48.5 percent) who had experienced only one operation previously. The highest number of past operations for any one patient was six.

In relation to the operation for which the patients were admitted, "hysterectomy" was the mode (24.2 percent) followed by "exploratory laparotomy" (21.2 percent) which included freeing of adhesions, removal of cystic lesions, taking of biopsies or similar procedures. The distribution of patients according to the type of operation is shown in Table 3.6 below.

TABLE 3.6 Distribution of Patients according to Type of Operation for which admitted

Type of Operation	Number of Patients	
Appendicectomy	2	6.1%
Cholecystectomy	4	12.1%
Urological	6	18.2%
Exploratory laparotomy	7	21.2%
Bowel resection	2	6.1%
Hysterectomy	8	24.2%
Other gynaecological procedures	3	9.1%
Herniorrhaphy	1	3.0%
Total	33	100%

It is not known what effect, if any, the variables discussed above have on the experience of pain, either individually or collectively. However, while it is acknowledged that individuals, and the two groups among the patients, differed to some degree along such variables as sex, age, socio-economic status, or number of previous admissions to hospital, it can also be argued that such differences reflect the true patient population of the hospitals included in the study.

METHODOLOGY OF DATA ANALYSIS

As discussed earlier in this chapter, qualitative research concerned with the discovery of substantive theory is exemplified by the concurrent collection and analysis of data. This process allows an experienced researcher to quickly develop important concepts, basic categories, and significant hypotheses, while simultaneously pruning away those items which are unproductive. Incidents of creative insight may also lead to new hypotheses or particular classification of data (Glaser and Strauss, 1970). The role of the researcher is therefore central, since neither raw data nor the analysis can be entirely divorced from the subjective role of the researcher.

In this study, the technique of concurrent data collection and analysis was utilized to a considerable extent. As a result, there was early recognition of certain aspects of the patient's experience of pain which were then explored in greater detail. While it was expected that most patients would report wound pain following surgery, it was only through the early analysis of participant observation records that it became evident that patients were also concerned with pain from other sources. Further observation and questioning revealed that the problem of coping with such pain was made more difficult by what patients perceived as a lack of concern among staff with pain other than that related to the surgical wound. Thus, in this case, the joint collection and analysis of data helped to create important data categories.

It was not possible, however, to undertake complete data analysis in the field. While some initial information was quickly extracted from

tape-recorded interviews, complete transcription and analysis took place after the researcher's return to New Zealand. Quantitative data analysis was accomplished using the Burroughs B 6700 computer at Massey University, and (for the computer programme) "Version 7" of the Statistical Package for the Social Sciences (SPSS) (Nie et al, 1975). The SPSS procedure "FREQUENCIES" was used to provide descriptive statistics such as one-way frequency distributions and measures of central tendency. The SPSS procedure CROSSTABS was used to provide the crosstabulation of variables.

Patients included in this study do not comprise a randomly selected sample. In the circumstances, it was neither practical nor possible to obtain a probability sample. The patients can be regarded as a population - self-selected by virtue of the individuals presenting themselves at the hospitals involved in the study, their reasons for admission, age, and ethnic background. While nonprobability sampling methods are recognised as appropriate for some types of research, there is a tendency among statisticians and social science researchers to regard the use of statistical inference with such samples as inappropriate (Blalock, 1960; Hardyck and Petrinovich, 1976). In particular, tests of statistical significance such as the Chi-square or student's t-test, are not regarded as legitimate, unless assumptions about sampling and nonsampling errors are met (Babbie, 1979). For this reason, and because of the research approach taken, quantitative analysis was restricted to descriptive statistics (see Chapter 4) and emphasis was placed on qualitative analysis (see Chapters 5, 6 and 7).

For readers with a strong statistical orientation the non-rigorous quality of the sampling and analysis may seem unacceptable; however, in the context of the present study, such an approach is regarded as legitimate and fully justified. As already discussed (p.65), statistical rigor is not regarded as an important aspect of the qualitative approach. Glaser and Strauss (1970) stress that in quantitative research one trusts the methodology of data collection and analysis, while in qualitative research the researcher trusts himself, his observations, and the value of his final analysis. The aim in presenting such research is to convey to the reader, as vividly as possible, the social world studied. In line with this approach therefore, Chapters 5, 6 and 7 of this report include a substantial

number of quotations from patient comments as well as excerpts from interviews.

SUMMARY

Because of the lack of formal theory in nursing, and the appropriateness of the qualitative approach to cross-cultural research, this study of the experience of pain in surgical patients was designed as a supplemented participant-observation study. Proponents of qualitative research in different branches of social science regard it as a strategy for the discovery of substantive theory, and not only as a preliminary step to quantitative research. The qualitative approach is characterised by concurrent collection and analysis of data, with conceptual categories emanating from the comparative analysis of data rather than from statistical manipulation or inference. With its reliance on participant-observation, in-depth interviewing, and dialectical questioning, the qualitative approach is particularly suited to cross-cultural research. However, problems of translation, controlling for unwanted variables, and acceptance of the investigator by the groups being studied, pose special difficulties which could hinder this type of research.

The present study involved 33 patients of Anglo-Australian and Yugoslav backgrounds admitted for abdominal surgery to three Australian hospitals. After the initial interview in the pre-operative period, participant-observation was continued for the duration of each patient's stay in hospital. Specific forms of data (such as subjective evaluations of pain by means of the visual analogue scale and verbal self report) were obtained for the first five days post-operatively and on the day prior to discharge. A final interview designed to elicit patients' retrospective evaluations of the exercise was also conducted on the day prior to discharge from hospital. As a result of the pilot study and preliminary data analysis, twelve questions and one general hypothesis were formulated during the study.

Patients included in the study were required to meet predetermined criteria related to age, cultural background, nature of hospitalization, and willingness to participate in the study. While

the two groups were relatively well matched for age, there were differences in relation to their socio-economic status, with more Yugoslavs in the lower occupational categories and Anglo-Australians more evenly distributed throughout the occupational spectrum. In addition, while there were twelve females in each group, only one Yugoslav male took part in the study as compared with eight males in the Anglo-Australian group. The majority of patients were married and most described themselves as either Protestant (Anglo-Australians) or Orthodox (Yugoslavs). The Anglo-Australians were predominantly urban dwellers while Yugoslavs tended to come from rural backgrounds, although all had lived in urban areas since arrival in Australia, on average 10-12 years previously. Most patients had previous experience of hospitalization and surgery with Anglo-Australian females having the highest average number of past hospitalizations and surgical operations. Surgical operations for which patients were admitted included gastro-intestinal, biliary, urological, and gynaecological procedures.

In relation to the analysis of data, some quantitative analysis was undertaken, the results of which are presented in Chapter 4 of this report. In the main, however, the emphasis is on qualitative analysis presented in Chapters 5, 6 and 7.

Chapter 4

DATA ANALYSIS AND FINDINGS (THE QUANTITATIVE PERSPECTIVE)

The material in this chapter is arranged in four sections, only one of which deals directly with the patients' experience of pain. The remaining three sections provide data which specify some of the important factors contributing to that experience:

(i) Peri-operative interventions which may cause pain or discomfort, or, on the other hand, seek to alleviate it;

(ii) Post-operative medications which are primarily designed to relieve pain and anxiety; and

(iii) Complications and length of hospitalization, in terms of their potential contribution to the patient's sense of wellbeing or suffering.

The last (and largest) part of the chapter presents data related to the evaluation of the patients' experience of pain, particularly in terms of their behavioural responses, verbal self reports, and estimations of the intensity of pain.

PERI-OPERATIVE INTERVENTIONS

The process of recovery from an abdominal operation entails the experience of an array of procedures, activities and interventions designed to monitor individual's progress, reduce the likelihood of complications and minimise patient's pain and discomfort. While the staff, no doubt, view their activities as designed for the patient's benefit, the patients are often unprepared for and bewildered by interventions such as injections, intravenous infusions, wound drains, catheters or naso-gastric tubes. The most common of these interventions will be presented as far as possible in the chronological order in which they tend to occur.

Drugs given pre-operatively

Premedication designed to sedate the patient, reduce anxiety, decrease glandular secretions, relax smooth muscle tissue, and/or produce partial amnesia is administered almost routinely prior to arranged surgery. Narcotic analgesics are often given as premedication since they not only have a sedative effect but also provide analgesia in the immediate post-operative period and tend to reduce the incidence of pre-operative and post-operative headaches (Hannington-Kiff, 1974). Of the 33 patients in the study group only one patient received no premedication, and the majority (69.7 percent) had narcotic only administered pre-operatively. Other drugs used included atropine sulphate or scopolamine hydrobromide (in 12.1 percent of patients) and promethazine hydrochloride (15.2 percent) as well as diazepam and other sedative preparations.

Duration of surgery

Duration of individual operations is influenced by many factors, including the type of operative procedure and the techniques used, complications encountered and the temperament and the skill of the surgeon. For the patients in the study group the duration of the operation varied from 35 minutes to 330 minutes (5.5 hours); for 42.4 percent the operation lasted one hour or less, and for 24.2 percent the operation lasted longer than two hours. The median for the whole group was 70.4 minutes and the mean was 91 minutes.

Wound sutures

The type of wound sutures used and their duration in situ have been implicated as contributing factors in the experience of post-operative pain (Shafer et al, 1971). Certainly patients tend to report wound sutures as "pulling" and some fear their removal as another source of pain. The majority of patients in the study group (69.7 percent) had interrupted nylon sutures, while 15.2 percent had subcuticular suture and the remaining 15.2 percent had either silk, metal clips, or a combination of suturing materials. The time period during which the sutures remained in situ varied from five to 14 days with more than half of all the patients (60.6 percent) having the sutures removed within eight days of surgery. The distribution according to the duration of sutures in situ is shown in Table 4.1.

TABLE 4.1 Frequency distribution of Patients according to the Duration of Sutures in situ

Time (days)	Number of Patients	
5 - 6	6	18.2%
7 - 8	14	42.4%
9 - 10	10	30.3%
11 and over	2	6.1%
Not recorded	1	3%
Total	33	100%

Wound drains, naso-gastric tubes, and urinary catheters

While wound drains are invariably inserted during the surgical operation and naso-gastric tubes and urinary catheters may be introduced prior to, during, or following the operation, they can all cause discomfort and sometimes pain. While over 50 percent of the study group (18 out of 33) had one or more wound drains (including "Penrose", "corrugated rubber" and "Haemovac", as well as "T-tube" and in one case "intercostal drain"), only nine patients had a urinary catheter and only seven had a naso-gastric tube inserted. For the wound drains, the mean duration of their stay in situ was 3.3 days (median 4 days) while for the urinary catheters the mean was 3.4 days (median 3 days). The mean of 5.7 days for the naso-gastric tube is inflated by one extreme case of 24 days - the median was 2 days. The distribution according to the duration in situ for the wound drains, urinary catheters and naso-gastric tubes is shown in Table 4.2.

TABLE 4.2 Frequency distribution of Patients according to the Duration in situ of Wound Drains, Urinary Catheters and Naso-gastric Tubes

Time (days)	Number of Patients with:					
	Wound drain(s)		Urinary Catheter		Naso-gastric tube	
1 - 2	6	18.2%	5	15.2%	5	15.2%
3 - 4	6	18.2%	1	3.0%	0	0%
5 - 6	3	9.1%	2	6.1%	0	0%
7 - 8	3	9.1%	0	0%	0	0%
9 and over	0	0%	1	3.0%	2	6.1%
Not applicable	15	45.4%	24	72.7%	26	78.7%
Total	33	100%	33	100%	33	100%

In relation to the naso-gastric tube only one patient of the seven concerned had the tube inserted following return from the operating theatre, although one patient required a change of tube twice. In relation to the urinary catheters, however, six patients were catheterised because of urinary retention within the first 24 hours post-operatively. One patient required two further recatheterisations.

Intravenous lines

While only some of the 33 patients required naso-gastric tubes or urinary catheters, all patients returned to the ward following surgery with an intravenous infusion. In most cases the infusion was continued only until adequate intake of fluids had been established orally, but in other cases intravenous lines were used for the administration of antibiotics and other drugs as well as plasma and blood, and in one case for total parenteral nutrition. In only one case did a patient receive a continuous intravenous infusion of a narcotic as a means of pain relief. The distribution of patients according to the duration of the intravenous infusion is shown in Table 4.3. With a third of all the patients having an intravenous infusion for only one day and another 10 patients for only two days, the mean duration for the total group was 3.1 days, with the median at 3.3 days.

TABLE 4.3 Frequency distribution of Patients according to the Duration of Intravenous Infusion

Time (days)	Number of Patients	
1 - 2	21	63.6%
3 - 4	8	24.3%
5 - 6	1	3.0%
7 - 8	1	3.0%
9 and over	2	6.1%
Total	33	100%

All of the procedures discussed thus far - premedication, duration of surgery, wound suturing, drains, catheters, naso-gastric tubes and intravenous infusions - have one thing in common: they are all invasive and can be perceived as threatening or actually disrupting bodily integrity. The significance of this for the patients in the

study group will be discussed in the next chapter.

POST-OPERATIVE MEDICATIONS

Hypnotic drugs

Apart from analgesic drugs designed to relieve pain, patients in hospital are often prescribed hypnotic or sedative drugs aimed at ensuring adequate sleep. While night sedation was not ordered for all patients in the study group, three-fifths of them (60.6 percent) took at least one dose of such medication during the post-operative period (see Table 4.4). The mean number of doses for the patients who took night sedation was 4.3, and the median was 4.0 doses. Since none of the patients received more than one dose within a 24 hour period the number of doses can also be taken to indicate the number of days on which night sedation was taken.

TABLE 4.4 Frequency distribution of Patients according to the Number of Doses of Night Sedation taken

Number of Doses	Number of Patients	
1 - 2	7	21.2%
3 - 4	5	15.2%
5 - 6	5	15.2%
7 - 8	1	3.0%
9 and over	2	6.0%
Not applicable	13	39.4%
Total	33	100%

Minor tranquilizers

As well as night sedation, patients in hospital are at times prescribed other depressant drugs, usually from the minor tranquilizers group. Occasionally, a patient who has been taking such medication at home is allowed to continue taking it in hospital. In this study only four patients (12.1 percent) took such medication. One patient had been taking diazepam prior to her admission to hospital, and continued to take it during the post-operative period. For two patients the prescription of such medication followed the development of crisis-type behaviour. In one further case the drug was given in order to facilitate carrying out of a procedure in a patient who was deemed to

be uncooperative.

Analgesic drugs

The greatest amount and variety of drugs administered post-operatively fall within the analgesic category. In the study group, all patients received at least one dose of narcotics and 26 patients (78.8 percent) also received other, less potent analgesics. The most frequently used narcotic was Pethidine HCl, given to 69.7 percent of all patients, followed by Omnopon (Papaveretum) which was given to 30.3 percent of the patients. Morphine and Fortral (Pentazocine) were each given in only one case, while there were two patients who were given both Pethidine and Omnopon.

The number of individual doses of narcotics varied from one (in one case) to 36 (also in one case). The distribution of patients according to the number of doses of narcotics received is shown in Table 4.5. The mean number of doses was 7.03, but this number reflects the influence of one patient who received a total of 36 doses of narcotics. When this case is excluded from calculations the mean for the remaining patients is 6.28 and the median is 6.21.

TABLE 4.5 Frequency distribution of Patients according to the Number of Doses of Narcotics Received

Doses of Narcotic	Number of Patients	
1 - 2	3	9.1%
3 - 4	6	18.2%
5 - 6	9	27%
7 - 8	6	18.2%
9 and over	8	24.3%
continuous IV infusion	1	3.0%
Total	33	100%

Another way of examining the amount of narcotics taken is to translate the total amount into approximate equianalgesic doses in relation to a standard opiate such as Morphine. The formula used here equates 10mg Morphine with 75mg Pethidine, 20mg Omnopon, or 30mg Fortral. The figures used are those suggested by Loan and Morrison (1973), although others investigating equipotency of

analgesic drugs have suggested slightly different figures (Silman, 1979). The total amount of narcotics received by individual patients varied from an equivalent of 13mg Morphine to 300mg Morphine (the second highest figure was 160mg). The mean total amount of narcotics taken was 75.15mg Morphine. When, however, the one extreme case (mentioned previously) is excluded, the mean is 68.16mg and the median 60.1mg.

TABLE 4.6 Frequency distribution of Patients according to the Total Amount of Narcotics Received

Amount of Narcotic (in Morphine mg Equivalent)	Number of Patients	
10 - 39	7	21.2%
40 - 69	12	36.4%
70 - 99	6	18.2%
100 - 129	5	15.2%
130 - 159	1	3.0%
160 - 199	1	3.0%
200 and over	1	3.0%
Total	33	100%

And finally, in relation to narcotics, the number of days on which narcotics were administered was also recorded. This record includes the day of the operation. The figures from this study reflect the usual trajectories for post-operative pain and administration of analgesia discussed in Chapter 1. As indicated in Table 4.7, most patients received at least one dose of narcotics for the first two or three days post-operatively, and only two patients received narcotics after the third post-operative day. When the case of the patient who received narcotics over a period of 18 days is excluded, the mean number of days of narcotics administration for the study group is 2.68 and the median is 2.7 days.

TABLE 4.7 Frequency distribution of Patients according to the Number of Days on which Narcotics Received

Number of Days on which Narcotics Received	Number of Patients	
1	2	6.1%
2	11	33.3%
3	15	45.5%
4	3	9.1%
5	1	3.0%
18	1	3.0%
Total	33	100%

While seven patients received only narcotics post-operatively, the majority of patients (78.8 percent) also received at least one dose of a milder analgesic, in most cases after the cessation of narcotics. The most common mild analgesic used was Paracetamol, taken by 65.4 percent of the patients who received such analgesics. Other analgesics and the numbers of patients who received them are shown in Table 4.8 below. (The totals in Table 4.8 exceed 100 percent due to the fact that 10 patients took more than one of the analgesics listed).

TABLE 4.8 Frequency distribution of Patients according to the Type of Mild Analgesic Received

Type of Analgesic	Number of Patients	
None taken	7	21.2%
Aspalgen[1]	1	3.0%
Capadex[2]	5	15.2%
Di-gesic[3]	9	27.3%
Panadeine[4]	1	3.0%
Paracetamol	17	51.5%
Soluble Aspirin	3	9.1%

1 Aspalgen - a trade name, each tablet contains Sol. Aspirin 300mg and Codeine Phosphate 8mg.

2 Capadex - a trade name, each tablet contains Dextropropoxyphene hydrochloride 32.5mg and Paracetamol 325mg.

3 Di-gesic - a trade name, each tablet contains Dextropropoxyphene Napsylate 50mg and Paracetamol 325mg.

4 Panadeine - a trade name, each tablet contains Paracetamol 500mg and Codeine Phosphate 8mg.

The total number of doses of narcotics a patient may be given are frequently strictly controlled by a medical prescription which specifies the maximum number allowed before a further prescription is required. (In two of the hospitals used in the study this maximum was frequently stipulated as part of the prescription and was set at 8 doses). This, however, is not the case with mild analgesics given orally. Even so, more than half of all the patients (54.5 percent) received four doses or less, and only five patients received more than 10 doses of mild analgesics. The distribution of the patients according to the number of doses of mild analgesics received is shown in Table 4.9. The maximum number of doses for any one patient was 22, while the mean for all patients was 5.45 doses and the median was 4.0 doses.

TABLE 4.9 Frequency distribution of Patients according to the Number of Doses of Mild Analgesics Received

Number of Doses	Number of Patients	
None	7	21.2%
1 - 2	7	21.2%
3 - 4	4	12.1%
5 - 6	3	9.1%
7 - 8	4	12.1%
9 - 10	3	9.1%
11 and over	5	15.2%
Total	33	100%

Since the number of doses of analgesics received is not necessarily indicative of the length of time during which such drugs are administered, the number of days on which mild analgesics were administered was also recorded. As shown in Table 4.10 almost half of all the patients (48.5 percent) received mild analgesics for two days or less while only two patients received such drugs for longer than six days (or alternatively, were still in hospital to receive them). The highest number of days on which mild analgesics were administered to any one patient was 11. The mean for all patients was 3.1 days and the median was 2.75 days.

TABLE 4.10 Frequency distribution of Patients according to the Number of Days on which Mild Analgesics Received

Number of Days	Number of Patients	
None	7	21.2%
1 - 2	9	27.3%
3 - 4	8	24.2%
5 - 6	7	21.2%
7 and over	2	6.1%
Total	33	100%

COMPLICATIONS and DURATION OF HOSPITALIZATION

Like other types of surgery, abdominal surgery carries some risk of complications, particularly in relation to wound healing, respiratory and circulatory functions, and the re-establishment of normal functioning of the alimentary tract and the urinary bladder.[1]

In this study, 19 of the 33 patients (57.6 percent) did not develop any complications while the remaining 14 patients (42.4 percent) had 21 complications between them. The most common complications involved the urinary tract with six patients developing urinary retention (requiring catheterisation), and three patients developing urinary tract infections. The second largest category of complications involved the gastro-intestinal tract with five patients developing paralytic ileus or similar problems. Other complications included postural hypotension, development of a large haematoma and scrotal swelling, pulmonary consolidation and collapse, allergic reaction to Pethidine, and allergic skin reaction to adhesive tape. The types of complications and their incidence are summarised in Table 4.11. (The totals in Table 4.11 exceed 100 percent due to the fact that five patients had more than one identifiable complication, including two patients with three complications each).

TABLE 4.11 Frequency distribution of Patients according to the Type of Post-operative Complication

Type of Complication	Number of Patients	
Urinary tract	9	27.3%
Gastro-intestinal tract	5	15.2%
Respiratory system	3	9.1%
Circulatory system	1	3.0%
Wound	1	3.0%
Allergic skin reaction	1	3.0%
Allergic drug response	1	3.0%
No complications	19	57.6%

[1] For the purposes of this study, complications were defined as those developments in the patient's condition not regarded as part of the normal response to surgical trauma and diagnosed and noted in the patient's records by the attending staff.

While in many cases complications had no appreciable effect on the length of stay in hospital (and in at least one case the hospitalization period was extended for social reasons), prolonged hospitalization nevertheless followed the development of complications in a number of cases. As shown in Table 4.12, duration of hospitalization varied from five to 35 days with the mode at nine days (in 30.3 percent of the cases), a mean of 11.36 days and a median of 10 days.

TABLE 4.12 Frequency distribution of Patients according to the Duration of Hospitalization

Duration of Hospitalization (in days)	Number of Patients	
5 - 6	2	6.1%
7 - 8	2	6.1%
9 - 10	16	48.5%
11 - 12	6	18.2%
13 and over	7	21.1%
Total	33	100%

ASSESSMENT OF PAIN

As outlined in Chapter 3, several approaches were used during the study in order to document not only the intensity of pain reported by the patients but also its spatial and temporal qualities. To achieve this, behavioural observations, verbal self reports and patients' subjective evaluations of pain using the Visual Analogue Scale were used.

The observation checklist for behavioural responses (see Appendix 2) was designed to record motor, vocal, verbal and social behaviours which could be indicative of the presence of pain. These recordings were not expected to provide a measure of the intensity of pain or its quality, but rather an indication of the variety of responses available to the person in pain. In this chapter, only the numbers of different responses in each category is examined - their significance is discussed in the next chapter. The intensity of pain

was recorded using the Visual Analogue Scale (see Appendix 3) and the Verbal Self Report (see Appendix 4), the latter also being used to record patient evaluation of the location and the relative duration of pain.

Behavioural Responses to Pain

In this section, four categories of behavioural responses - motor, vocal, verbal, and social - are presented.[1] In analysing these data, each type of behavioural response noted to be present during each day of observation was given the value of one. The total figure for each category therefore indicates the number of different behaviours observed by the researcher rather than the duration, intensity or any other quality of the behaviour.

The first record of behavioural responses was obtained during the initial period of interaction and the first interview prior to surgery (T_1). The subsequent records were obtained from the first post-operative day until the fifth post-operative day (T_2 - T_6) and on the day prior to discharge from hospital (T_7).

(a) Motor Behaviours

In relation to motor behaviours recorded, there is an overall trend with both the percentage of patients displaying such behaviours, and the average (mean) number of behaviours, peaking during the first post-operative day (T_2), and thereafter showing a steady decline. The pattern is illustrated in Fig 4.1 and Fig 4.2. As indicated in Appendix 2, the motor behaviour category included behaviours such as restless movements, rigid posture, facial tenseness, teeth clenching, lip biting, restless walking, clammy or sweaty skin, and similar behaviours.

The two groups in the study, the Yugoslavs and the Anglo-Australians, had a similar percentage exhibiting pain-related motor behaviours at each point of observation, as illustrated in Fig 4.3. The greatest difference between the two groups occurred on the fifth

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[1] Definitions of motor, vocal, verbal, and social behavioural responses are given on pages 59-60.

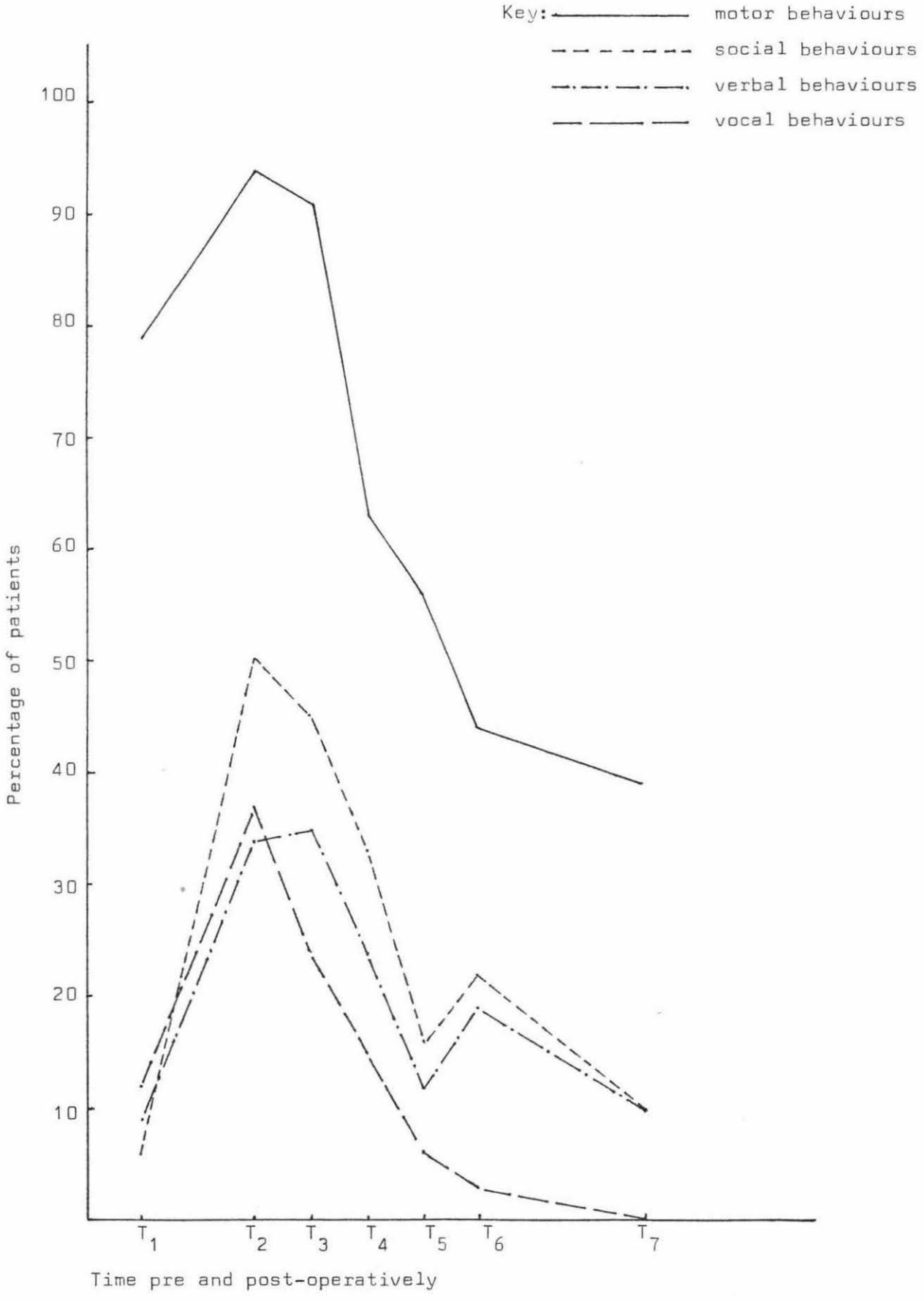

Fig 4.1 Percentage of patients showing pain-related motor, vocal, verbal, and social behaviours, T_1 - T_7

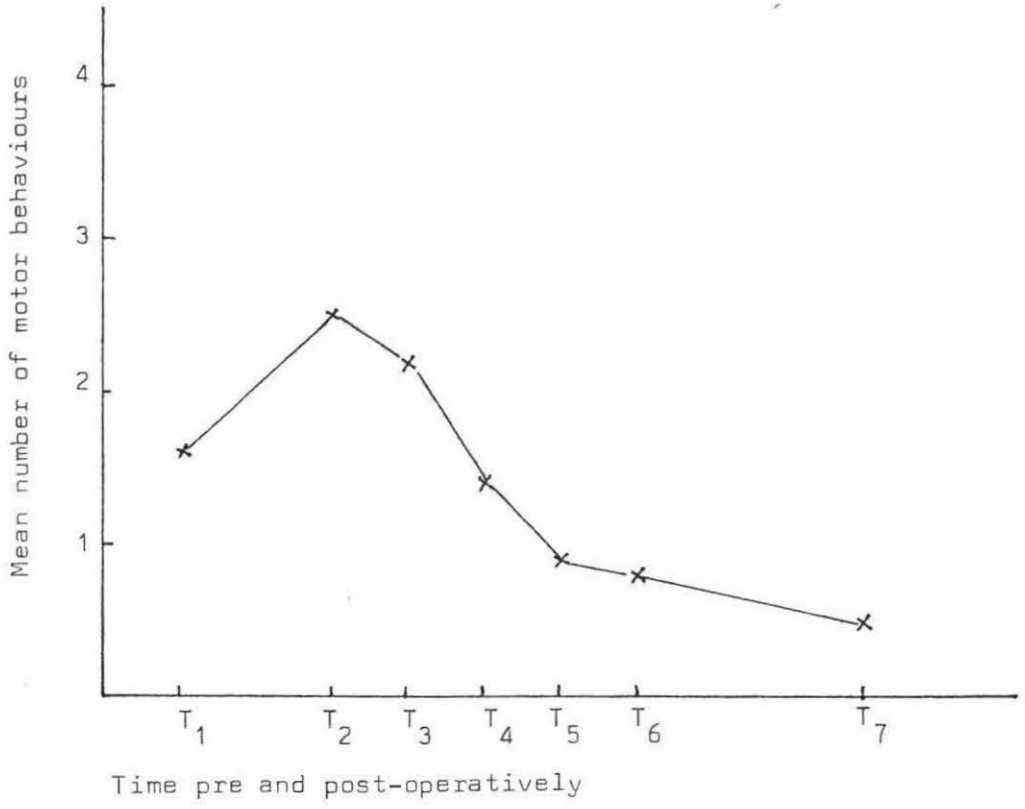

Fig 4.2 Distribution of the mean number of pain-related motor behaviours, T_1 - T_7

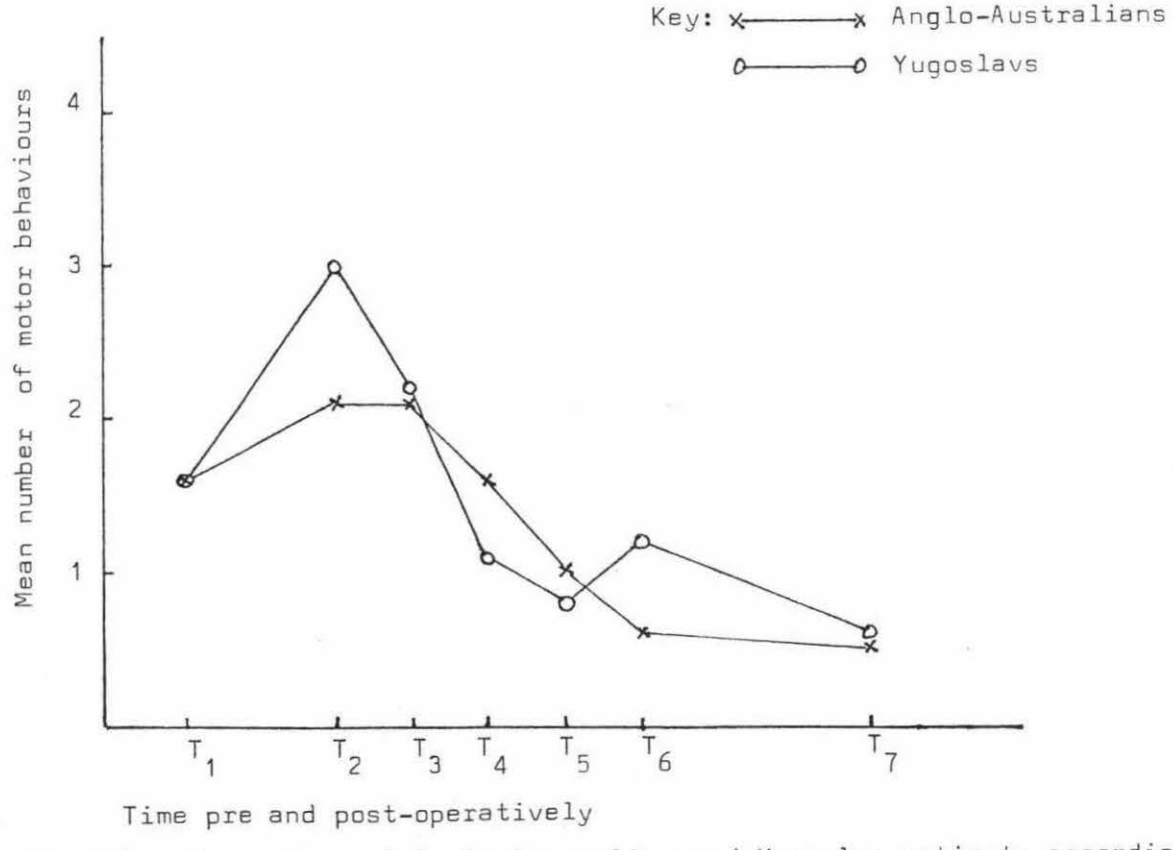

Fig 4.3 Comparison of Anglo-Australian and Yugoslav patients according to the mean number of pain-related motor behaviours, T_1 - T_7

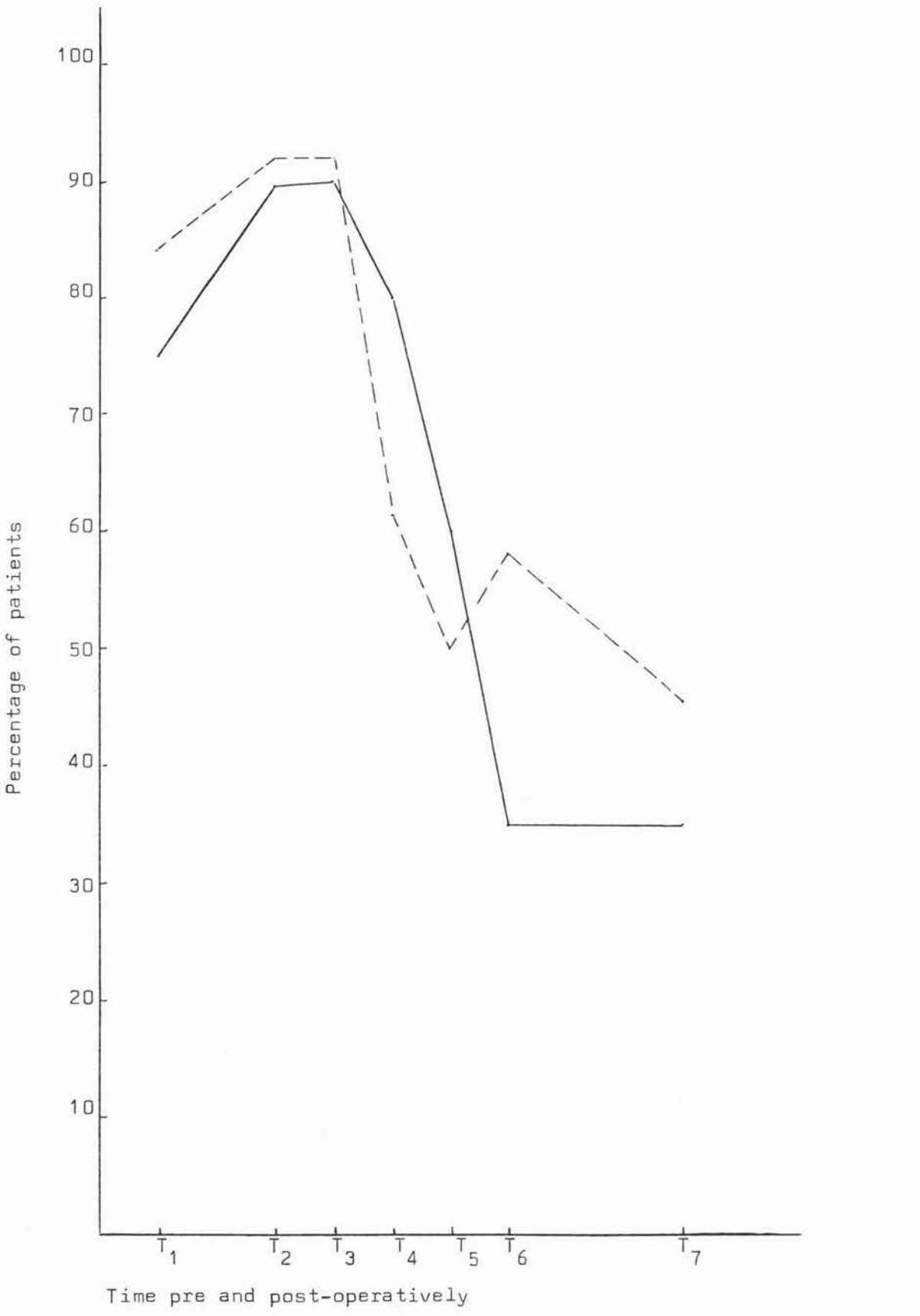

Fig 4.4 Percentage of patients showing pain-related motor behaviours, T_1 - T_7 (Anglo-Australian and Yugoslav groups)

post-operative day (T_6), when 35 percent of the Anglo-Australians as compared with 58 percent of the Yugoslavs showed pain-related motor behaviours. The two groups were also very similar when the average numbers of motor behaviours were compared for each point of observation, as illustrated in Fig 4.4. Except for the group means on the first post-operative day (T_2), there were no appreciable differences between the Anglo-Australians and the Yugoslavs in the study group.

(b) Vocal behaviours

As shown in Fig 4.1, the percentage of patients in the total group who exhibited pain-related vocal behaviours was considerably smaller than the percentage for motor behaviours. The vocal behaviour category included moaning, groaning, crying, screaming, grunting, and other similar behaviours.

The Anglo-Australian and the Yugoslav groups showed similar patterns in relation to the percentage of patients in whom vocal behaviours were observed, as illustrated in Fig 4.5. Both groups had the greatest percentage of patients exhibiting vocal behaviours on the first post-operative day (T_2), but the Anglo-Australian group showed a more rapid decline in the numbers of such patients. Except for the third post-operative day (T_4), when the numbers of Anglo-Australian patients in whom vocal behaviours were observed declined to five percent while the Yugoslavs remained at 31 percent (see Fig 4.5), there were no appreciable differences between the two groups. Anglo-Australian and Yugoslav patients showed similar trends when the mean number of vocal behaviours for each group was compared over time (see Fig 4.6), with no marked differences between the two groups at any point of observation.

(c) Verbal Behaviours

In relation to pain-related verbal behaviours (which included talking about pain, complaining, asking for help, cursing, pleading, etc.) the percentage of patients showing such behaviours was initially similar to those showing vocal behaviours. However, in the case of verbal behaviours the numbers declined at a slower rate and there was a small rise on the fifth post-operative day (T_6) with some 10 percent of patients still engaging in such behaviours on the day prior to discharge from hospital (T_7), as illustrated in Fig 4.1.

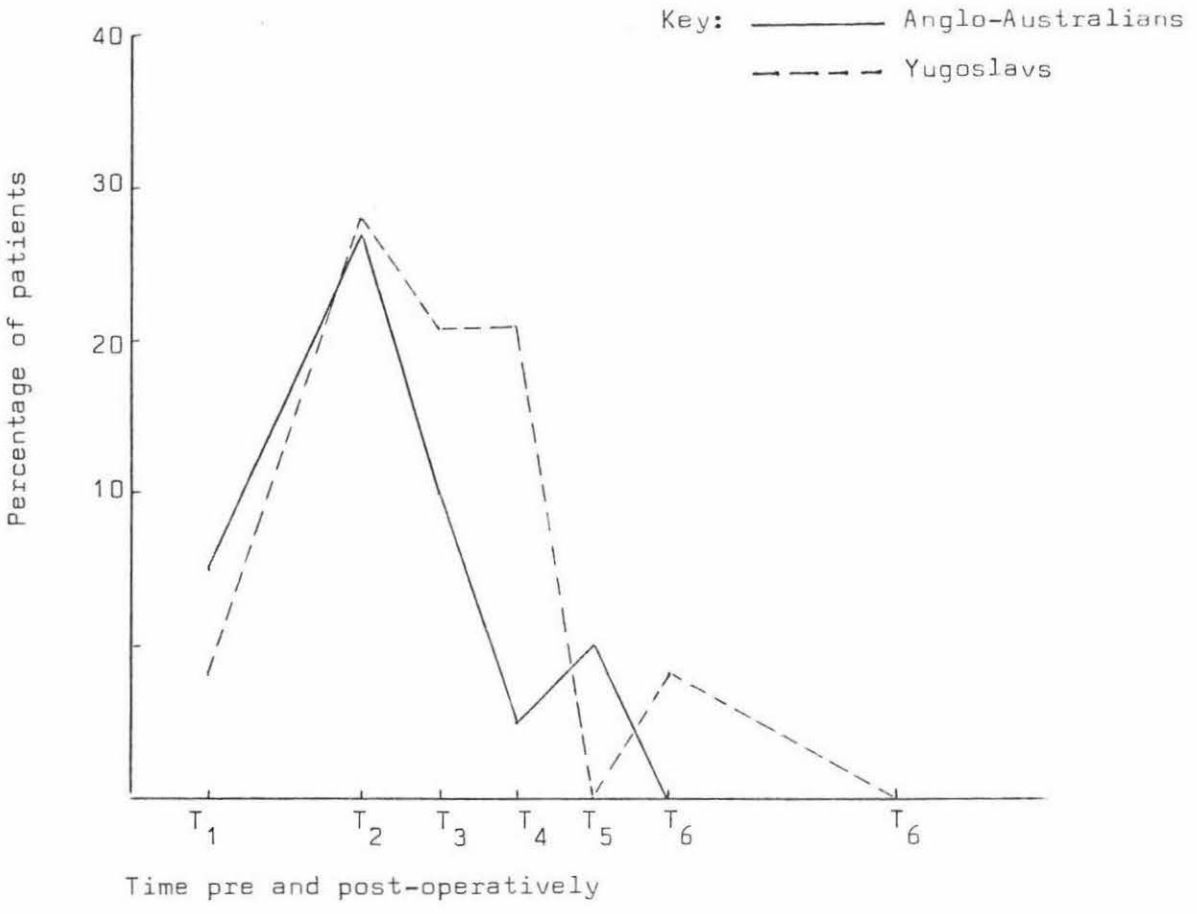

Fig 4.5 Percentage of patients showing pain-related vocal behaviours, T_1 - T_7 (Anglo-Australian and Yugoslav groups)

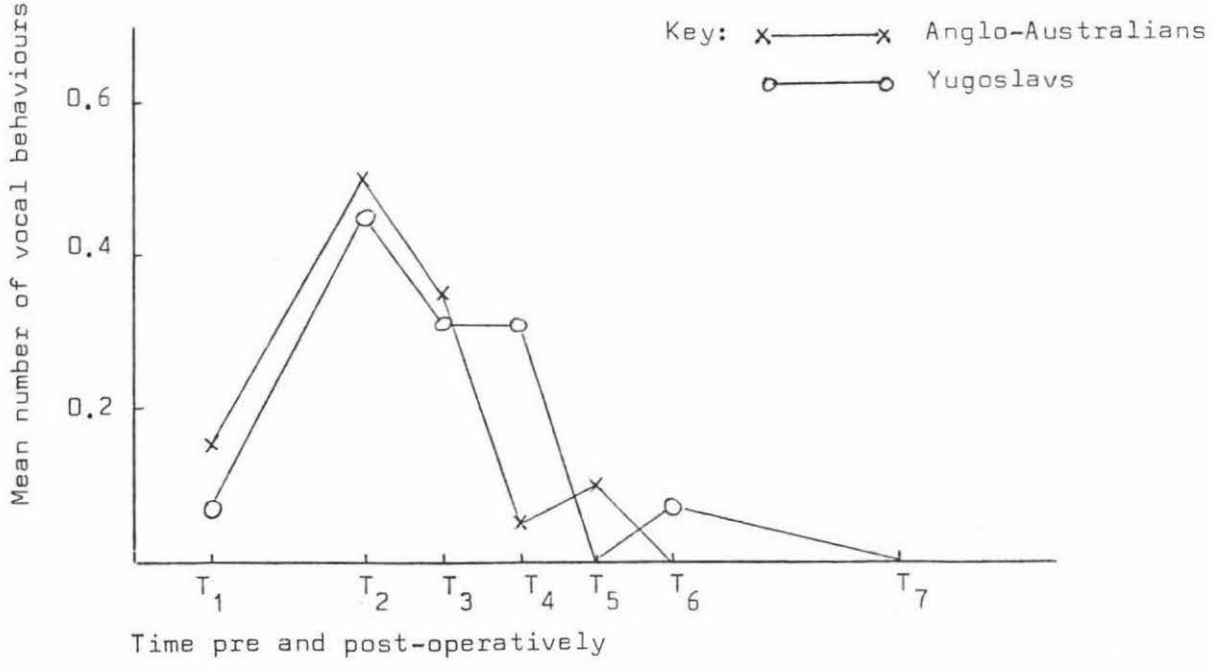

Fig 4.6 Comparison of Anglo-Australian and Yugoslav patients according to the mean number of pain-related vocal behaviours, T_1 - T_7

The Anglo-Australian and the Yugoslav groups appeared dissimilar in relation to the percentage of patients in each group exhibiting pain-related verbal behaviours. At all stages (except pre-operatively) the Yugoslav group had a greater percentage of patients with verbal behaviours (see Fig 4.7). When the two groups were compared for the mean number of pain-related verbal behaviours a similar pattern emerged with the Yugoslav group tending to show higher means in the post-operative period (see Fig 4.8). The differences were particularly marked on the first and second post-operative days (T_2 and T_3, respectively) and again on the fifth post-operative day (T_6).

(d) Social behaviours

The category of pain-related social behaviours contained such items as clinging, changes in personal appearance, social manners and communication, social withdrawal and other similar behaviours. The overall numbers of patients engaging in such behaviours were similar to those for vocal and verbal behaviours with a slightly higher peak on the first post-operative day (see Fig 4.1).

A comparison between the Anglo-Australian and Yugoslav groups in relation to the percentage of patients with pain-related social behaviours revealed a similar pattern over time, except for the fifth post-operative day (T_6) (as illustrated in Fig 4.9) when the numbers of Yugoslav patients in this category increased sharply before declining again prior to discharge. When the two groups were compared in relation to the mean number of social behaviours, the Anglo-Australian group demonstrated higher means, except for the fifth post-operative day (T_6) when the mean was higher for the Yugoslav group (see Fig 4.10). Group differences, however, were not marked, except for the fifth post-operative day.

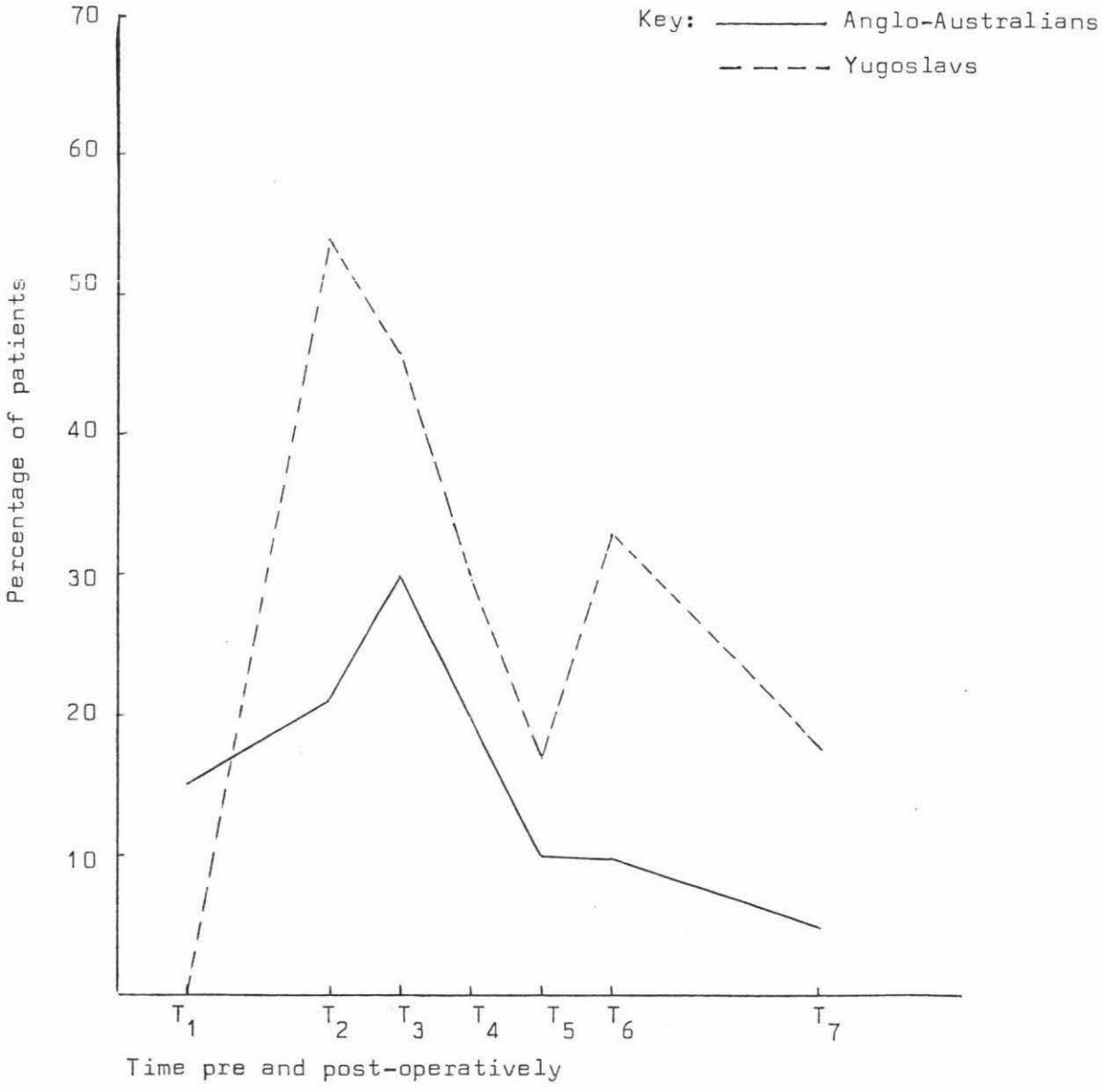

Fig 4.7 Percentage of patients showing pain-related verbal behaviours, T_1 - T_7 (Anglo-Australian and Yugoslav groups)

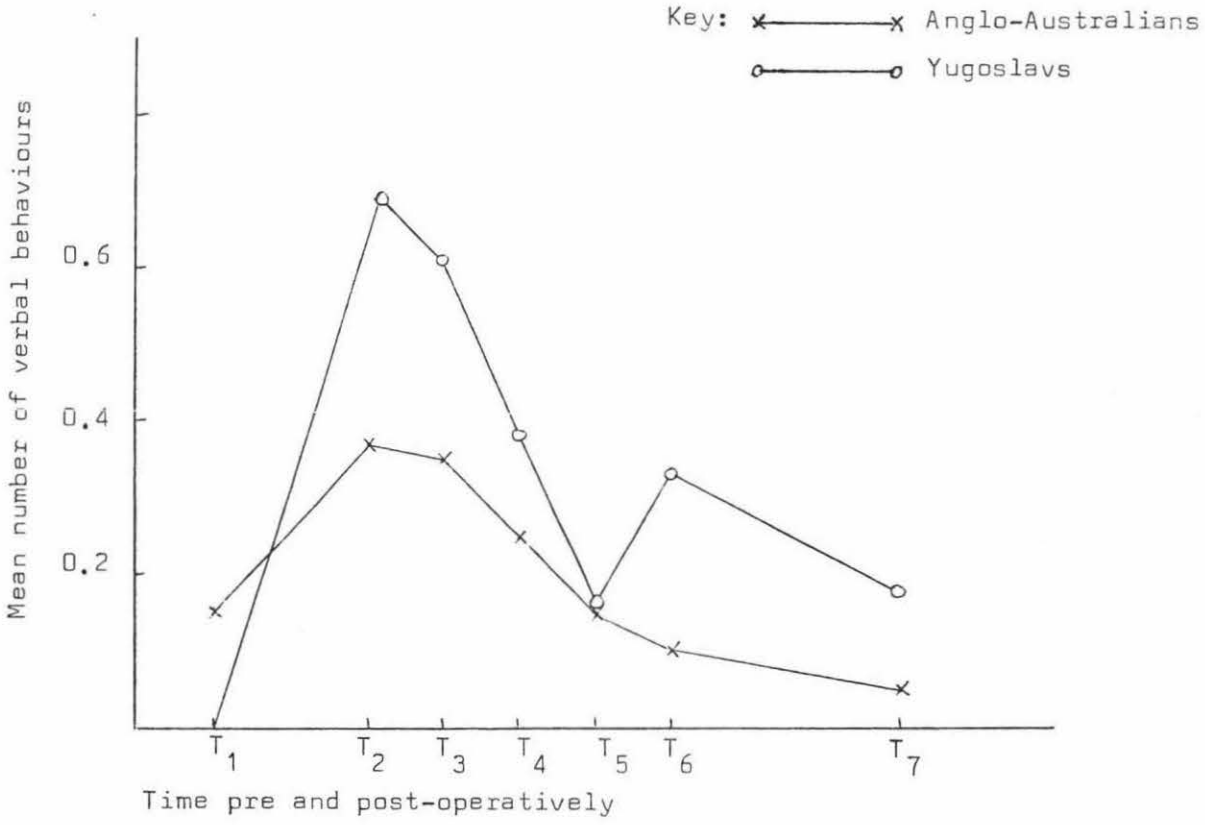

Fig 4.8 Comparison of Anglo-Australian and Yugoslav patients according to the mean number of pain-related verbal behaviours, T_1 - T_7

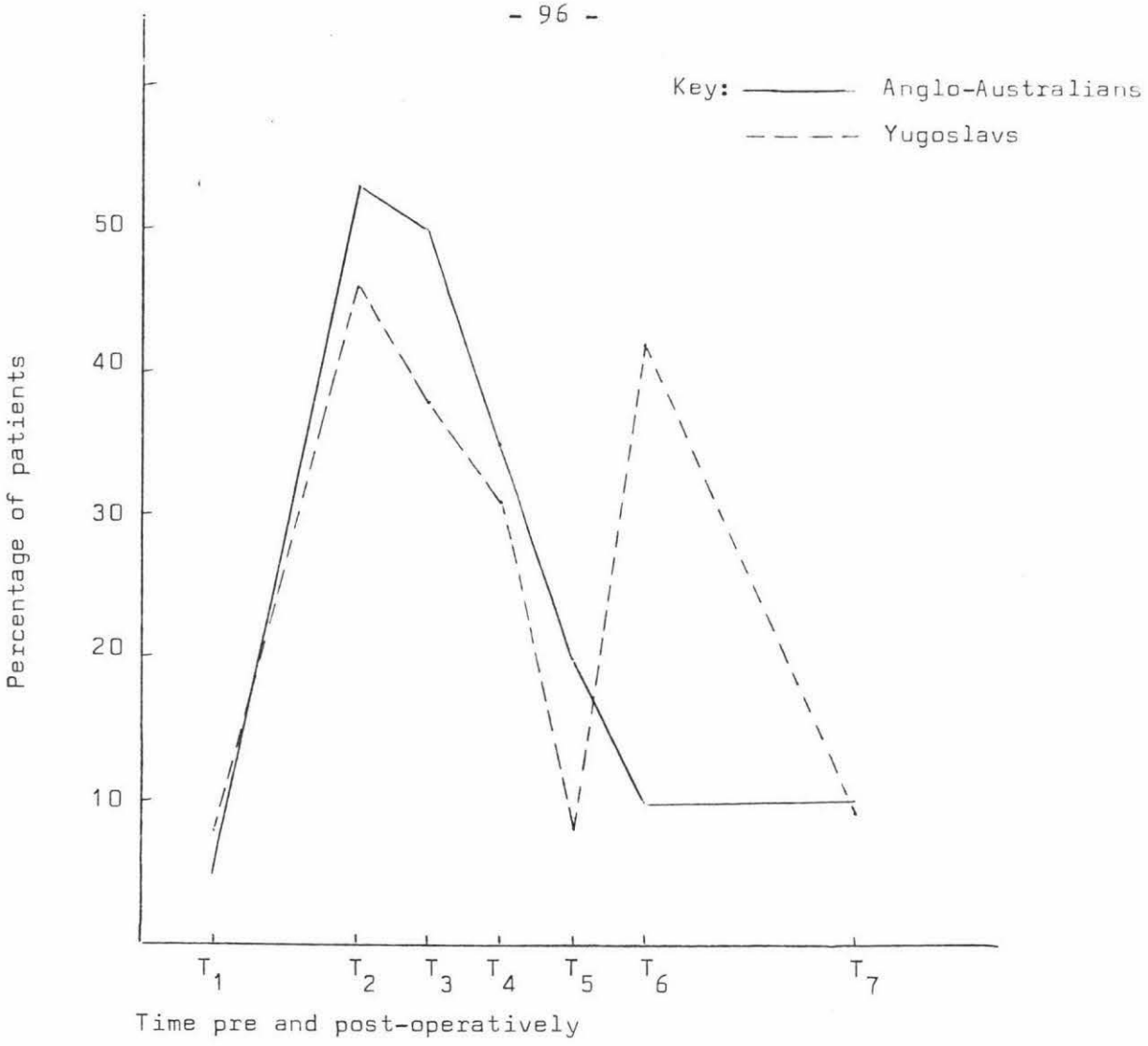

Fig 4.9 Percentage of patients showing pain-related social behaviours, T_1 - T_7 (Anglo-Australian and Yugoslav groups)

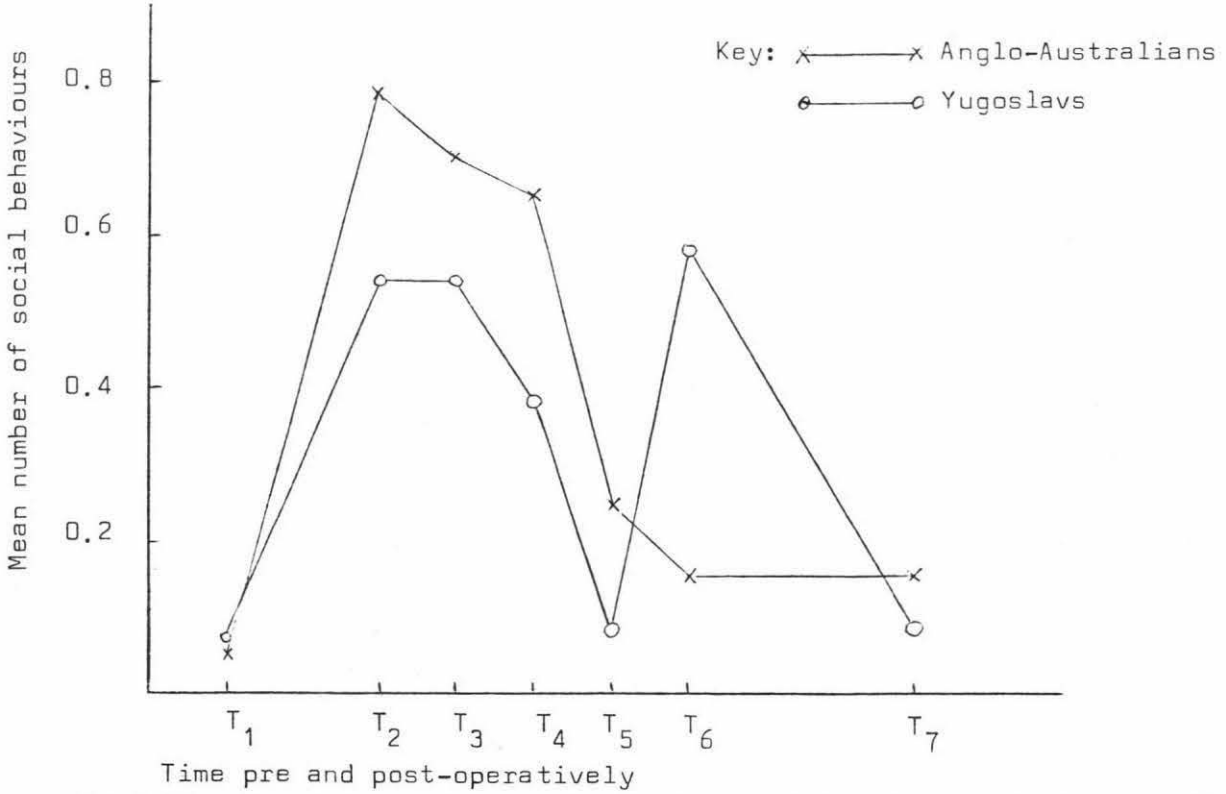

Fig 4.10 Comparison of Anglo-Australian and Yugoslav patients according to the mean number of pain-related social behaviours, T_1 - T_7

Verbal Self Reports of Pain

The verbal self report approach was used throughout the study in order to record subjective statements of the temporal and spatial characteristics of pain, as well as its intensity. During each recording session patients were asked to describe their pain in terms of its duration, location, and intensity (see Appendix 4), and to describe their overall feelings. Their comments were recorded immediately after the session with as many comments as possible recorded in full. These comments were analysed during the study until categories for each type of self report emerged, allowing subsequent comments to be classified.

(a) Duration of pain

In relation to the duration of pain two main categories were used, depending on whether the pain was reported as present all the time (constant pain), or whether there were intervals during each day when pain was absent for varying lengths of time (intermittent pain). The intermittent category included pain reported as occurring only occasionally (e.g. on movement), as well as pain reported as being present almost all the time. Pain was classified as constant, regardless of changes in its intensity, providing that patients reported having some degree of pain all of the time.

The Anglo-Australian and Yugoslav groups demonstrated very similar patterns in terms of the numbers of patients in the two categories, as shown in Fig 4.11. While only one patient in each group reported having constant pain pre-operatively (T_1), the numbers on the first post-operative day (T_2) increased to 83 percent for the Anglo-Australians and 77 percent for the Yugoslavs, with more than half of the patients in both groups still reporting constant pain on the second post-operative day (T_3). As indicated in Fig 4.11, the number of patients reporting constant pain decreased over time, but some 10 percent of patients still reported constant pain on the day prior to discharge (T_7). The numbers of patients reporting intermittent pain increased over time to a peak on the fourth post-operative day (T_5) and thereafter slowly declined. The decline in the number of patients reporting either intermittent or constant pain was related to the gradually increasing number of patients who reported having no pain after the fourth post-operative day (see Fig 4.12).

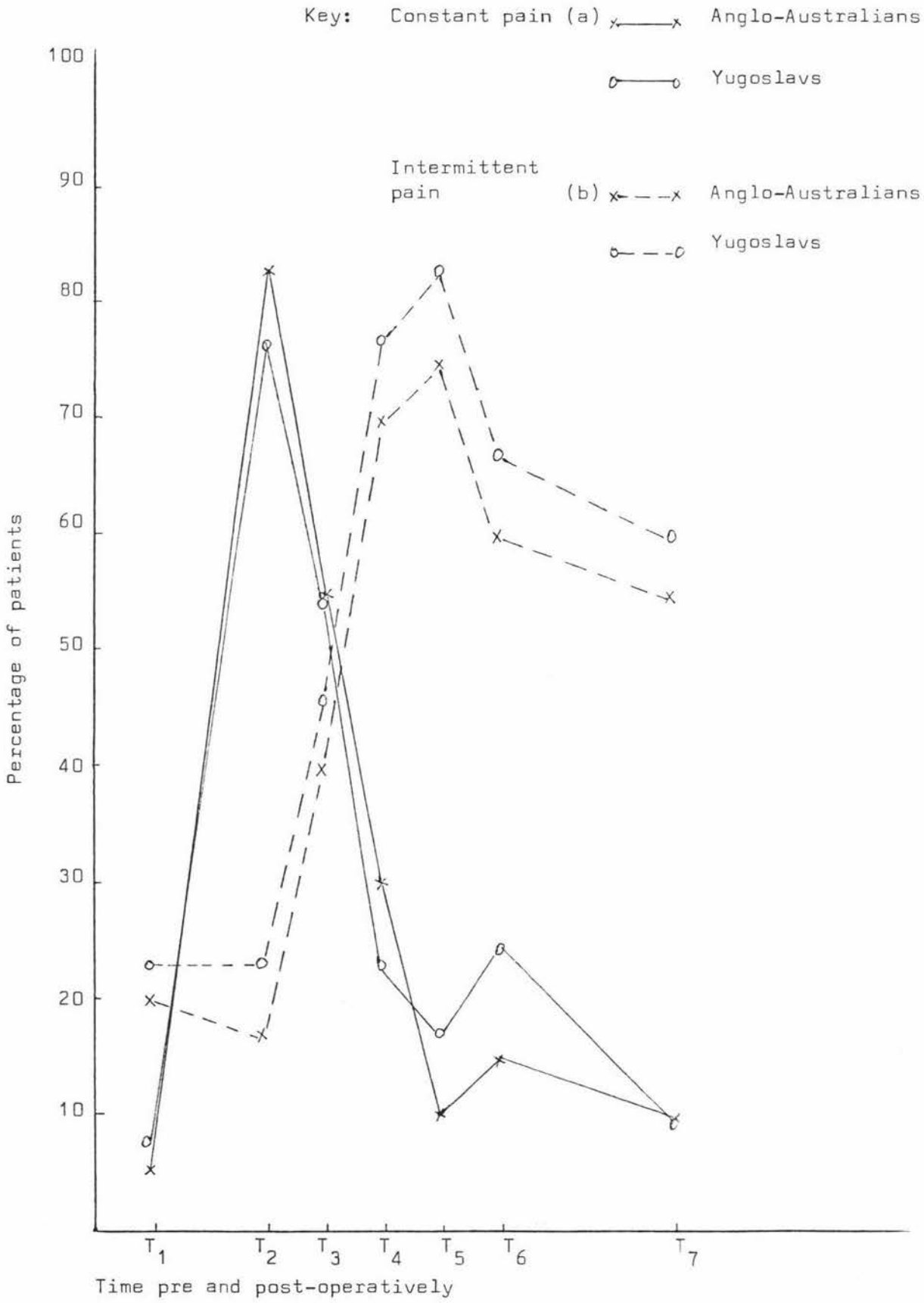

Fig 4.11 Percentage of patients according to reported temporal quality of pain, T_1 - T_7 (Anglo-Australian and Yugoslav groups)

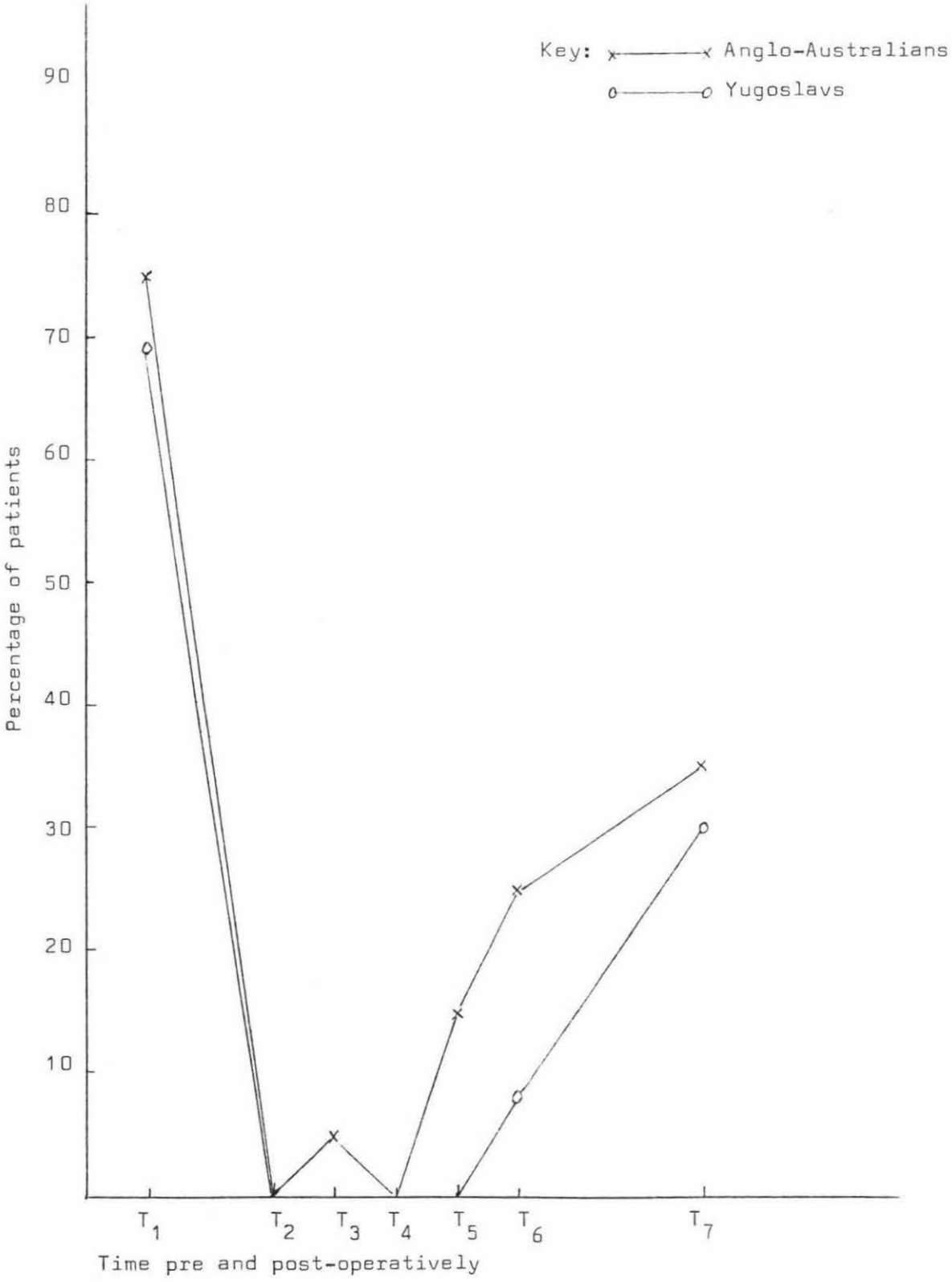

Fig 4.12 Percentage of patients reporting "no pain", T_1 - T_7 (Anglo-Australian and Yugoslav groups)

(b) Location of pain

In relation to the reported location of pain, three main categories emerged:

(i) "wound only", where pain was reported to be localized to the area of the surgical wound;

(ii) "wound and abdomen", where pain was reported to be in the area of the wound but also extended to the surrounding parts of the abdomen (e.g. right side of the abdomen associated with an appendicectomy wound);

(iii) "other pain", where pain was reported as being in an area away from the surgical wound (e.g. backache, or pain in the left upper quadrant of the abdomen associated with a hysterectomy wound).

During the initial stages of recovery, i.e. the first three days post-operatively, the majority of patients (64.5 percent, 66.7 percent, and 63.6 percent respectively) reported their pain to be localized to the "wound and abdomen". There were appreciable differences between the Anglo-Australians and Yugoslavs on the first and second post-operative day, however, with more Anglo-Australians than Yugoslavs reporting their pain in this manner (see Fig 4.13).

The pattern for the "wound only" category is somewhat different, as illustrated in Fig 4.14, with smaller numbers of patients reporting their pain to be localized to the wound area in the first three post-operative days than in the later stages of recovery. Although more Yugoslav patients reported their pain to be localized to the wound area on the first and fifth post-operative days than did the Anglo-Australian patients, the reverse occurred on the third and fourth post-operative days, as well as the day prior to discharge.

A much smaller number of patients reported pain located in areas away from the surgical wound, i.e. "other pain", as illustrated in Fig 4.15. Except on the fifth post-operative day when the figures were very close, a greater percentage of Yugoslavs reported their pain as being located away from the surgical wound. The differences between the two groups, however, were not marked.

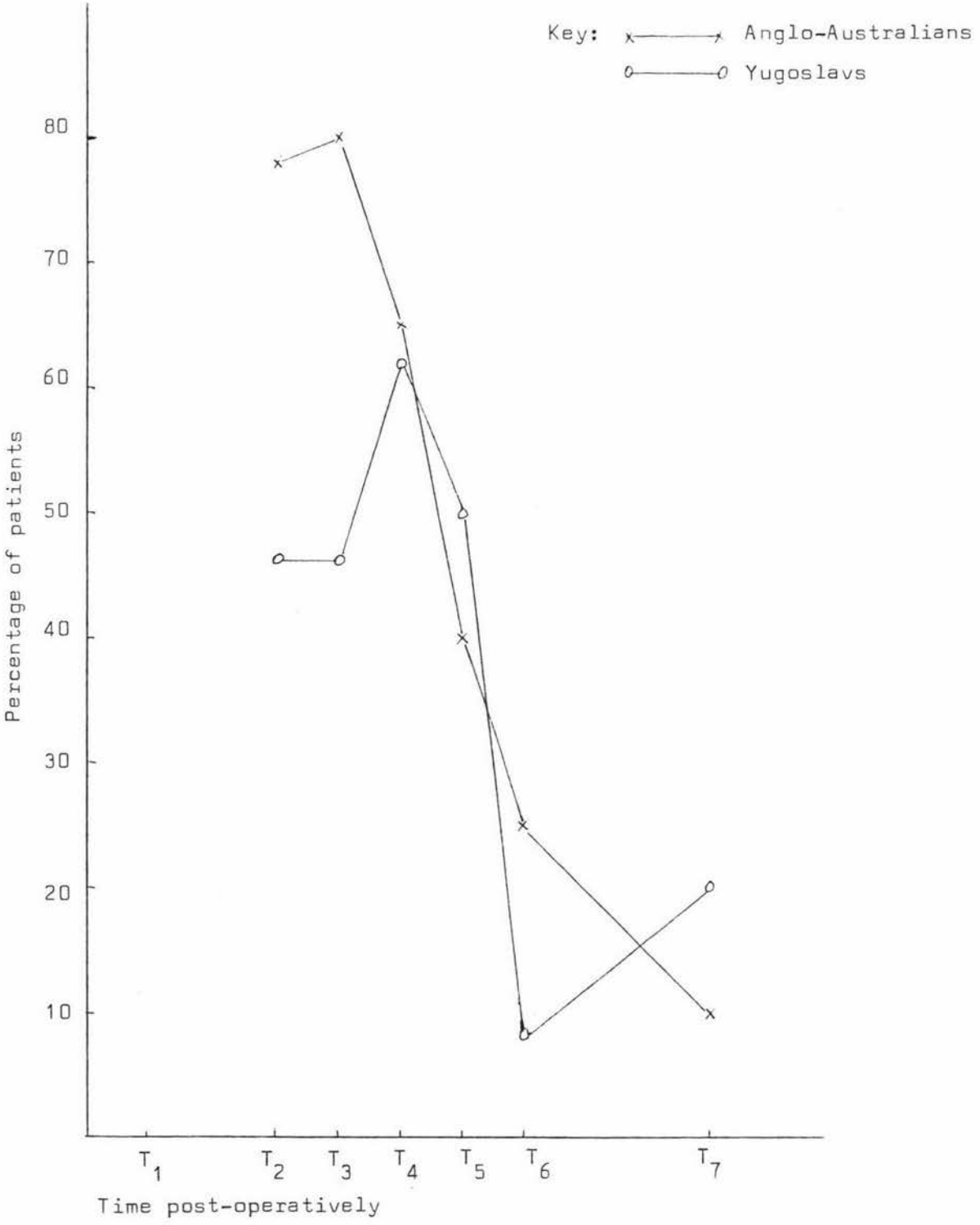

Fig 4.13 Percentage of patients reporting location of pain as "wound and abdomen", T_2 - T_7 (Anglo-Australian and Yugoslav groups)

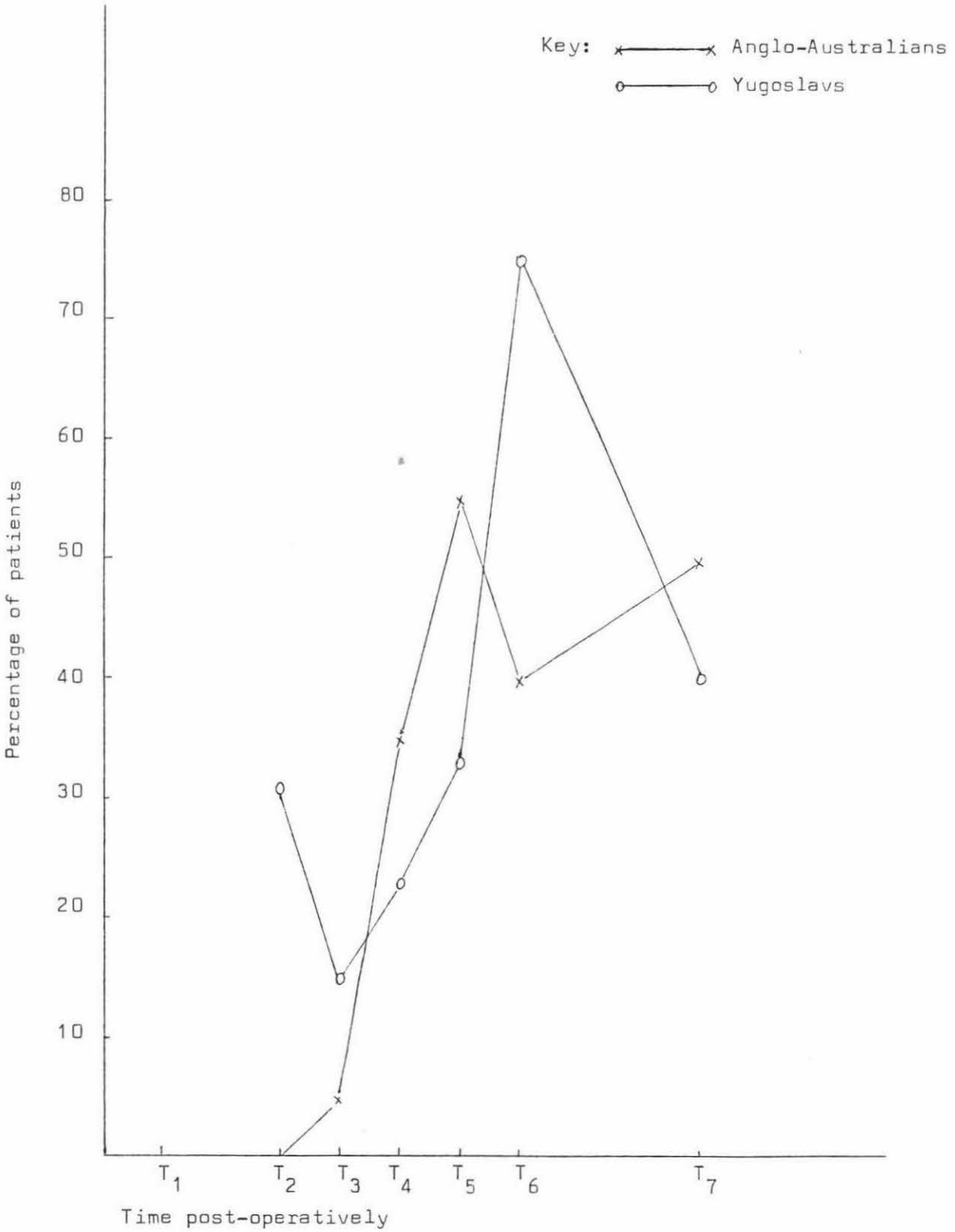

Fig 4.14 Percentage of patients reporting location of pain as "wound only", T_2 - T_7 (Anglo-Australian and Yugoslav groups)

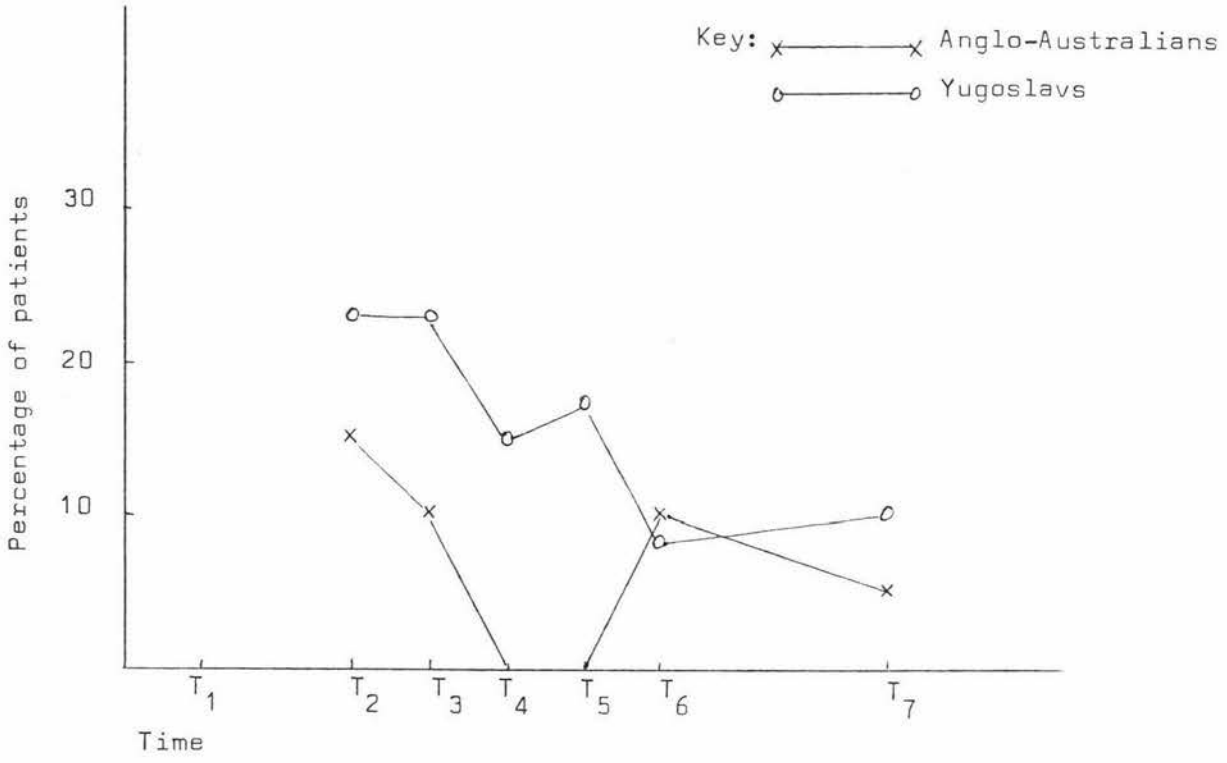

Fig 4.15 Percentage of patients reporting location of pain as "other pain", T_2 - T_7 (Anglo-Australian and Yugoslav groups)

Reports of Pain Intensity

As mentioned in the previous section, verbal self reports also included comments about the intensity of pain, when patients were asked to describe the strength or the severity of their pain for the preceding 24 hours. In line with the dialectical questioning of qualitative methodology, patients were helped to classify the intensity of their pain around five main categories, i.e. no pain, mild, moderate, severe, and very severe pain. Due to the nature of pain, patient activities, the effects of medication and other factors, the intensity of pain is not perceived as constant but changing. Patients therefore frequently described their pain as varying (e.g. from mild to severe, or from no pain to moderate pain), and these variations were incorporated into the verbal self report. Since the potential number of variations in using the five basic categories is 15,[1] for the purposes of presentation the 12 categories actually used were reduced into the original five categories by placing each statement into the category corresponding to the higher intensity. For example, "no pain to moderate pain" was classified as moderate pain, or "mild to severe pain" was classified as severe pain.

The distribution of patients according to the reported pain intensity is shown in Table 4.13 (for the Anglo-Australian patients) and Table 4.14 (for the Yugoslav patients). When the numbers of patients reporting "severe" and "very severe" pain in the two groups are compared, they reveal a similar pattern with the majority of patients falling into this category on the first post-operative day (92 percent of the Yugoslavs and 75 percent of the Anglo-Australians). As shown in Fig 4.16, there was a rapid decline in the number of patients reporting severe or very severe pain on subsequent days, with no marked differences between the two groups.

1

no pain	no pain to severe pain	moderate to very severe pain
no pain to mild pain	mild to severe pain	
mild pain	moderate to severe pain	severe to very severe pain
no pain to moderate pain	severe pain	
mild to moderate pain	no pain to very severe pain	very severe pain
moderate pain		
	mild to very severe pain	

TABLE 4.13 Distribution of Anglo-Australian patients according to the reported intensity of pain (Verbal Self Report), T_1 - T_7

Time Period	Pain Intensity						
	Nil	Mild	Moderate	Severe	Very Severe	Not Stated	Total
Time 1	15	3	2	0	0	0	20
Time 2	0	0	3	13	2	2	20
Time 3	1	1	7	11	0	0	20
Time 4	0	6	4	10	0	0	20
Time 5	1	8	8	3	0	0	20
Time 6	5	4	9	2	0	0	20
Time 7	7	8	4	1	0	0	20

TABLE 4.14 Distribution of Yugoslav patients according to the reported intensity of pain (Verbal Self Report), T_1 - T_7

Time Period	Pain Intensity						
	Nil	Mild	Moderate	Severe	Very Severe	Not Stated	Total
Time 1	9	1	2	1	0	0	13
Time 2	0	0	1	11	1	0	13
Time 3	0	1	4	6	2	0	13
Time 4	0	1	7	5	0	0	13
Time 5	0	1	6	5	0	1	13
Time 6	1	3	7	0	1	1	13
Time 7	3	3	2	2	0	3	13

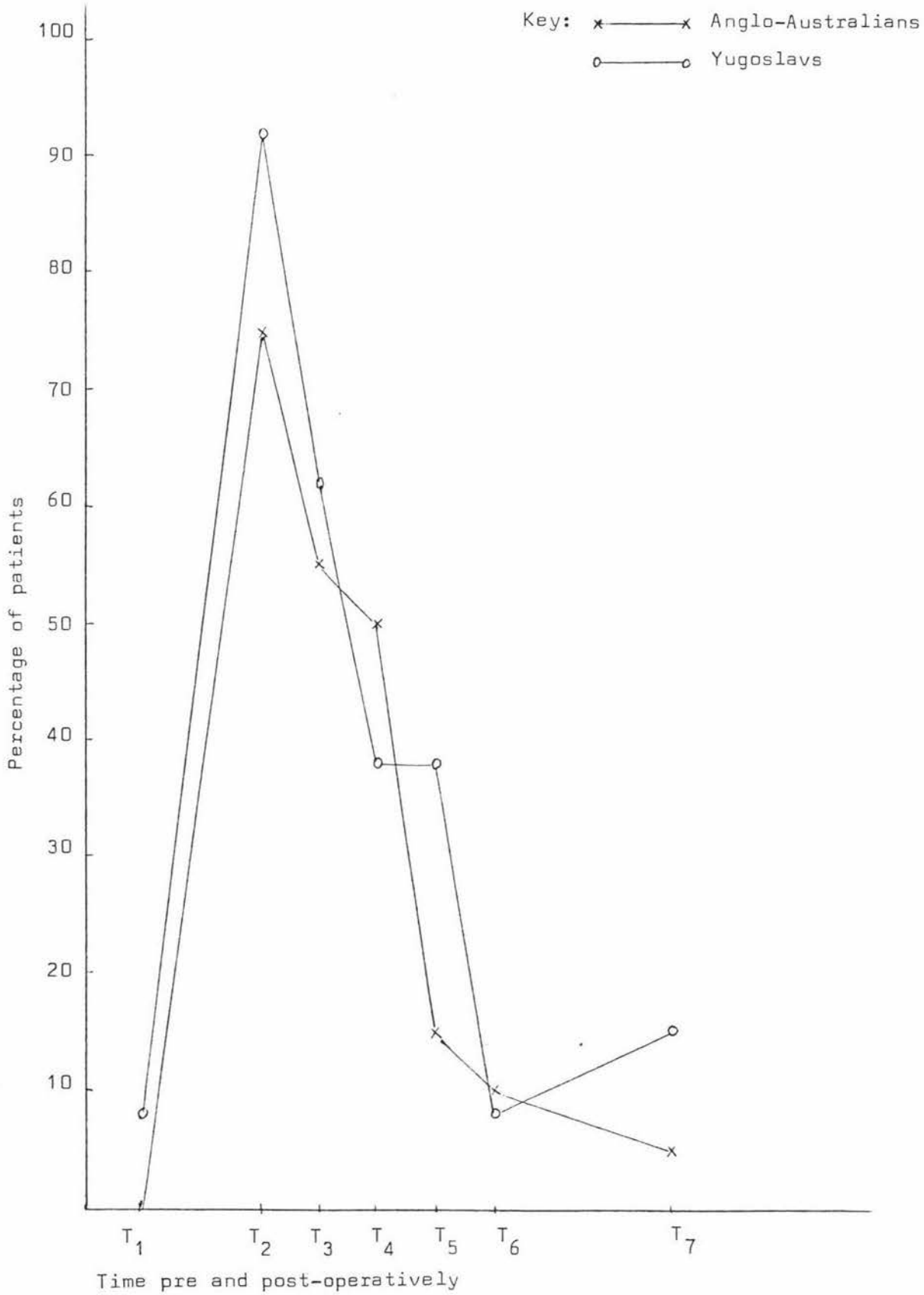

Fig 4.16 Percentage of patients reporting pain intensity as "severe" or "very severe", T_1 - T_7 (Anglo-Australian and Yugoslav groups)

In relation to "moderate" pain, the pattern for the two groups was again similar with the greatest number of patients reporting their pain as "moderate" on the fifth post-operative day (T_6). The third post-operative day was the only time when there was an appreciable difference between Anglo-Australians and Yugoslavs (see Fig 4.17). In the pre-operative period and during the first two post-operative days, less than 10 percent of the group reported "mild" pain. The number did increase, however, after the fourth post-operative day (see Fig 4.18). Correspondingly, while the majority of patients reported having "no pain" pre-operatively, in the first three post-operative days only one patient, on one occasion, reported "no pain". After the fourth post-operative day the percentage of patients reporting "no pain" rose gradually, as illustrated in Fig 4.12.

A slightly different measure of pain intensity was provided by the Visual Analogue Scale. Cumulative scores were calculated for the two groups and are summarized in Table 4.15 (Anglo-Australian group) and Table 4.16 (Yugoslav group). A closer examination of the tables shows some interesting trends. Firstly, the mean and median pain intensity scores for the Anglo-Australian group are consistently lower than those for the Yugoslav group. The curvilinear pattern of the means distribution, however, is similar for the two groups, as illustrated in Fig 4.19, with a peak on the first post-operative day (T_2) and a gradual decline after that point. And secondly, comparison of the scores reveals a tendency for the Yugoslav group to have a smaller range of scores with fewer minimum scores of zero. Thus the Yugoslav group appears to have had greater intra-group similarity of pain intensity scores than the Anglo-Australian group.

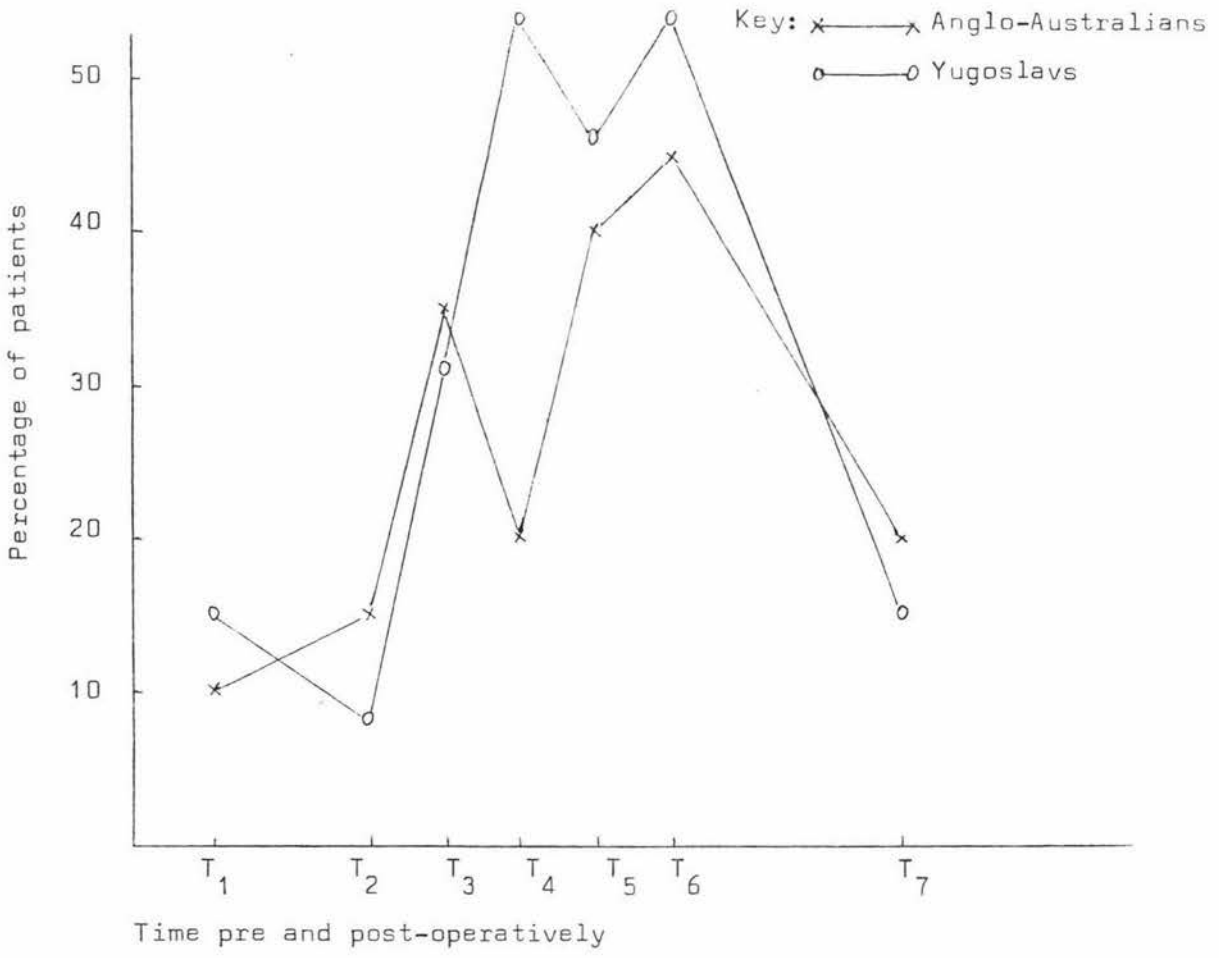

Fig 4.17 Percentage of patients reporting pain intensity as "moderate", T_1 - T_7 (Anglo-Australian and Yugoslav groups)

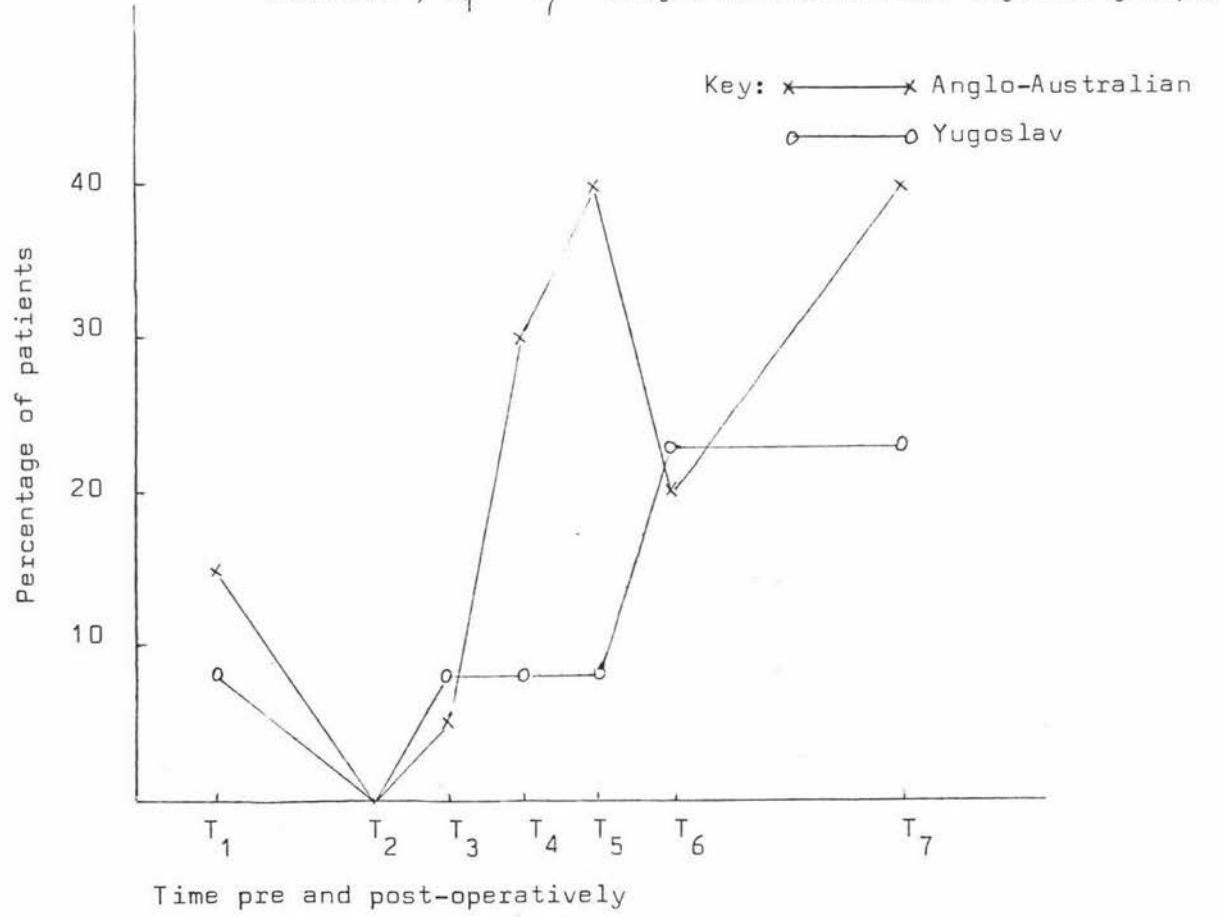

Fig 4.18 Percentage of patients reporting pain intensity as "mild", T_1 - T_7 (Anglo-Australian and Yugoslav groups)

TABLE 4.15 Summary of the pain intensity scores (Visual Analogue Scale), Anglo-Australian group, T_1 - T_7

Time Period	Mean	Standard Deviation	Median	Minimum	Maximum	Range
Time 1	5.8	12.1	0.17	0	42	42
Time 2	66.9	19.8	63.5	32	100	68
Time 3	46.7	18.7	44.5	4	74	70
Time 4	41.6	29.4	43.5	0	94	94
Time 5	27.4	19.9	26.0	0	59	59
Time 6	26.9	24.2	18.5	0	73	73
Time 7	15.7	20.8	6.5	0	74	74

TABLE 4.16 Summary of the pain intensity scores (Visual Analogue Scale), Yugoslav group, T_1 - T_7

Time Period	Mean	Standard Deviation	Median	Minimum	Maximum	Range
Time 1	11.7	18.1	0.31	0	44	44
Time 2	70.3	20.9	73.3	33	97	64
Time 3	61.2	20.0	62.7	30	91	61
Time 4	46.4	17.2	46.0	17	78	61
Time 5	49.8	15.1	46.5	22	70	48
Time 6	40.8	27.9	43.5	0	94	94
Time 7	26.0	20.4	26.5	0	59	59

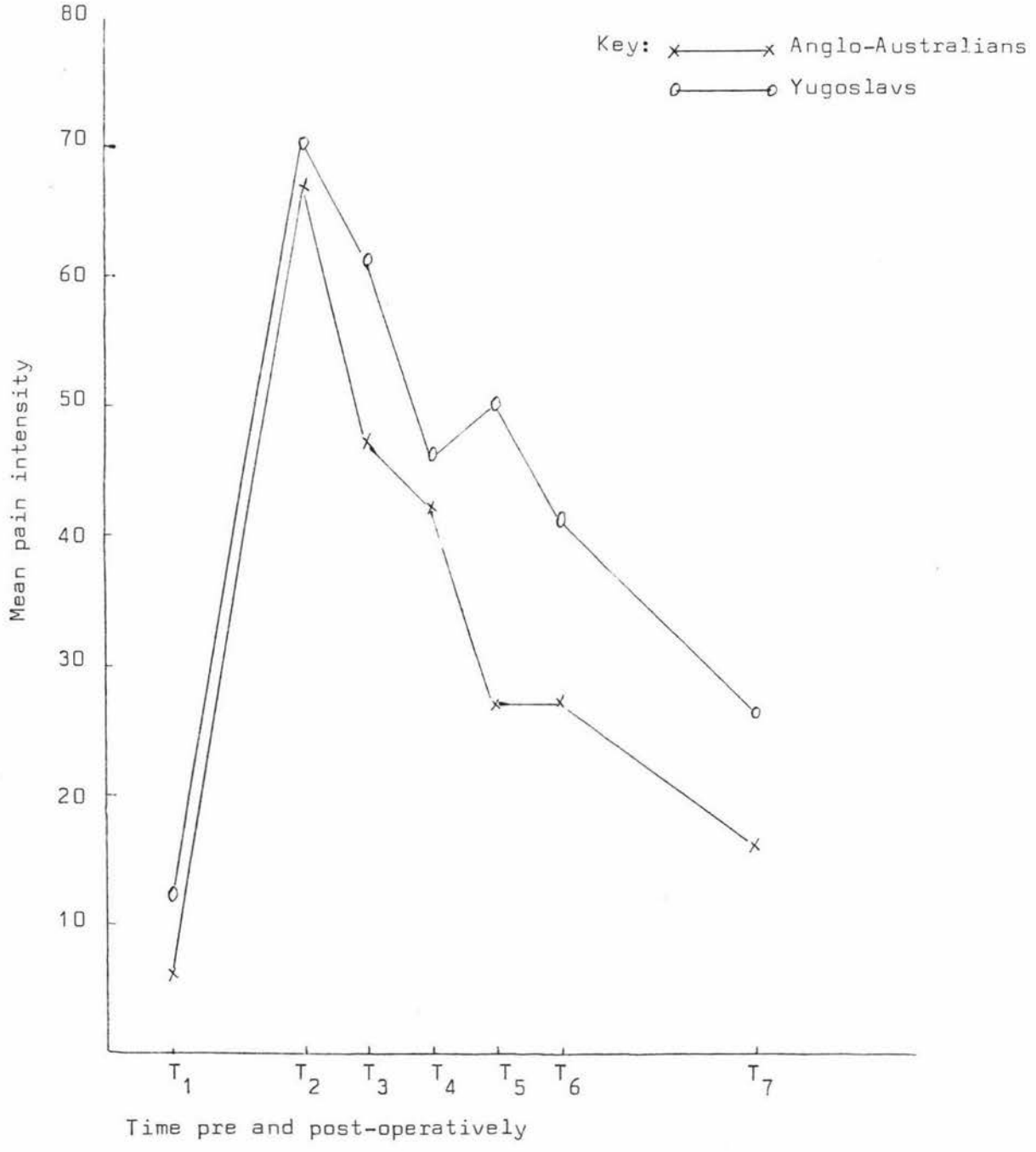

Fig 4.19 Comparison of the mean pain-intensity scores, Anglo-Australian and Yugoslav groups, T_1 - T_7

SUMMARY

The experience of post-operative pain is influenced by a number of factors, including the interventions or treatments designed to facilitate wound healing and general recovery, or to alleviate pain and discomfort. The presentation in this chapter has focused on the quantitative analysis of data related to peri-operative interventions, post-operative medications, incidence of complications and duration of hospitalization, and on the evaluation of pain in terms of patient's verbal and non-verbal behaviours.

In relation to the peri-operative interventions, it was found that all but one patient received some form of premedication, with the majority of patients having narcotics by intramuscular injection. In relation to the duration of surgery, there was considerable variation between individuals but more than half of the patients underwent operations of more than one hour's duration. The majority of patients had interrupted nylon sutures for the closure of the wound. In 60.6 percent of cases wound sutures were removed within eight days, but in other cases remained in situ for up to 14 days. While just over one half of the patients had one or more wound drains inserted during surgery, 27.3 percent had urinary catheterization, and 21.3 percent had a naso-gastric tube inserted. In the majority of cases such drains, catheters, and/or tubes remained in situ for three to four days. On the other hand, all patients had intravenous lines inserted, with an average duration of their stay in situ of just over three days.

In relation to post-operative medication, 60.6 percent of patients received at least one dose of hypnotic drugs designed to aid sleep, while 12.1 percent also took drugs from the minor tranquilizers group. On the other hand, all patients received at least one dose of narcotics, most frequently Pethidine or Omnopon. The average number of doses of narcotics per patient was 6.28, with the average total amount equivalent to 68.16mg of Morphine. The average length of narcotics administration was 2.68 days. In addition to narcotics, 78.8 percent of patients also received at least one dose of milder analgesics, most often Paracetamol. The average number of doses was 5.45, with more than one half of the patients receiving four doses or less, over a period of two to three days.

Post-operative complications were diagnosed in 42.4 percent of patients. Most frequently these involved urinary retention or infection, or alimentary tract problems such as paralytic ileus. In at least five cases, complications involved more than one body system. The effects of complications were related to the duration of hospitalization in that while the majority of patients were discharged within 12 days of admission, in 21.1 percent of cases the period of hospitalization extended from 13 to 35 days.

In relation to the behavioural responses to pain, four categories of such behaviours (motor, vocal, verbal, and social) were observed. Analysis of pain-related motor behaviours revealed an overall pattern of both the percentage of patients in whom such behaviours were observed, and the average number of behaviours, peaking on the first post-operative day and thereafter showing a steady decline. While vocal behaviours were observed in a smaller percentage of patients, the pattern of a peak on the first post-operative day followed by a steady decline was again evident. There were no appreciable differences between the Anglo-Australians and Yugoslavs, in relation to either motor or vocal responses. Analysis of pain-related verbal behaviours revealed some group differences, with a greater percentage of Yugoslavs engaging in such behaviours throughout the post-operative period. The differences were less marked in relation to the social behaviours.

The two groups were also similar in their reports on the temporal qualities of pain, with the majority reporting their pain as constant during the first two days post-operatively and intermittent thereafter. Less than 20 percent reported having no pain by the fifth post-operative day, this number rising to one third by the time of discharge. In relation to the spatial qualities of pain, the majority of patients reported their pain as extending beyond the wound but being localized to the abdominal area. Overall, Yugoslavs showed a greater tendency to report their pain as localized to the wound itself, or being located away from the wound, while Anglo-Australians tended to describe their pain as localized to the wound and the surrounding area.

And finally, in relation to the reported intensity of pain,

there was again a curvilinear pattern with the peak on the first post-operative day when the majority of patients reported their pain as severe or very severe. As the percentage of patients reporting their pain as severe declined, there was a corresponding rise in the percentage of those who reported their pain as moderate and mild. Analysis of the scores obtained by means of the visual analogue scale revealed the same curvilinear pattern, but with the average scores for the Anglo-Australians consistently lower than those for the Yugoslav group. In addition, Yugoslav patients showed less intra-group variability with a smaller range of scores and fewer scores of zero.

The overall picture which emerges from the quantitative analysis of the data thus far is one of considerable similarity between the Anglo-Australian and Yugoslav patients in their responses to pain. The quantitative analysis, however, provides a rather limited insight into the experience of pain, particularly from the point of view of the people in pain and their ideas and feelings about the experience. The focus of the three chapters which follow will therefore be on the qualitative analysis of data obtained during participant observation and interviews, and the discussion of the significance of the findings presented in this chapter.

Chapter 5

SURGICAL PATIENTS AND THE EXPERIENCE OF PAIN

> It (pain) was really severe, it was as much as I could bear at times...now I haven't got any pain, I have a very tender soreness, but it's not painful pain, it's just uncomfortable.
>
> (Mrs A.R., 8th post-operative day)

As discussed in Chapter 2, post-operative pain which follows routine surgical operations can be characterized as predictable, acute, with a clearly identifiable source, and of relatively short duration. Both staff and patients have expectations of some pain, not all of which can be eliminated, but there are also expectations that patients will recover, and that all pain will eventually end.

This chapter examines the experience of post-operative pain from a qualitative perspective, and includes a look at the intensity, duration and quality of pain, pain-related behaviours, and the problems of pain arising from sources other than wound and surgery. The presentation builds on material introduced in the fourth chapter by: (a) examining the meaning and significance of the experience for individual patients; and (b) by exploring similarities and differences between the Anglo-Australians and Yugoslavs, not only in terms of observable responses but also in terms of underlying attitudes.

In line with the qualitative approach, patients are quoted directly and extensively, in order to illustrate the nature of data on which the findings are based, and to communicate more vividly the meaning of the experience for the individuals involved. For the most part, comments quoted were transcribed from tapes and are not altered, except where it was necessary to insert words to aid clarity, or exclude less relevant comments, again for the sake of clarity, as well as economy of space. Comments from Yugoslav patients were translated by the researcher, with some help from two bilingual university graduates, one of whom is a trained interpreter while the other is a qualified nurse. These points about the style of presentation, and

translation, apply also to Chapters 6 and 7 of this report.

INTENSITY OF PAIN

The first question which the study considers is as follows: What intensity of pain do patients experience post-operatively and during which period do patients experience the greatest intensity of pain?

As indicated in Tables 4.13 and 4.14 the majority of patients (i.e. 75 percent of the Anglo-Australians and 92.3 percent of the Yugoslavs) reported their pain to have been either severe or very severe on the first post-operative day (T_2). During the same time period, 83 percent of the Anglo-Australians and 77 percent of the Yugoslavs reported their pain to have been constant (see Fig 4.11). Thus, in spite of the analgesics administered during this period, the majority of patients suffered some degree of pain all of the time, and the majority experienced their pain as severe or very severe at least some of the time.

Pain estimations requested from patients, to indicate overall intensity of pain for the preceding 24 hours (VAS), yielded results on the first post-operative day which support the contention that most patients experienced a high intensity of pain during that time. On a 100mm scale, only six patients indicated that their overall pain was below the 50mm mark (three were Anglo-Australians and three Yugoslavs), while for the majority the intensity of pain was considerable and for some it was bordering on the maximum amount that they felt they could tolerate. Eleven patients (a third of the total) marked the overall intensity of their pain as being above 80mm. Six of these 11 patients were Anglo-Australian and five were Yugoslav, indicating similarity between the two groups. The mean group scores of pain intensity, on the first post-operative day were, 66.9 for the Anglo-Australians and 70.3 for the Yugoslavs (see Fig 4.19).

Patient's verbal reports also support the view that during the first post-operative day the intensity of pain was severe and even distressing for most patients. An analysis of both the verbal self reports and participant observation records for the first post-operative day reveals that only 15 percent of the patients (three Anglo-Australians

and two Yugoslavs) made comments which indicated that pain was tolerable. The following are two typical comments:

> It hurts, but I can stand it; it's not that bad.
>
> (C.A., Anglo-Australian male)

> It (pain) still catches you so you can't breathe, but it's easing; it's not too bad.
>
> (K.B., Yugoslav female)

The remaining 28 patients (84.8 percent) gave indications of experiencing considerable distress. One factor which a number of patients had in common was the evaluation of their current pain as either worse than their previous experiences of pain, or worse than their expectations of what the pain was going to be like. The following examples are typical of comments made on the first post-operative day:

> It is much, much worse than I expected...the pain is quite vicious.
>
> (M.P., Anglo-Australian female)

> I knew I would have pain, but I didn't expect it would be as sore as this. It is unbearable until they give me an injection.
>
> (G.F., Anglo-Australian female)

Another element of the experience was the feeling that pain was something outside of the individual's control, from which the individual wished to escape but in the end had no choice but to suffer. The lack of control was related to the intensity of pain, and also to recognition of the fact that usual ways of coping (such as walking around as a means of relieving the pain or "taking one's mind off it") were not possible at this stage of recovery. As one patient commented:

> It's hurting a lot, it's unbearable...if your foot or your tooth is aching you can walk, you can help yourself, but with this pain you can't even budge.
>
> (Z.C., Yugoslav female)

For some patients the time of the most intense pain was the immediate post-operative period. While many patients reported their

memory of the return from the operating room and the remainder of the day of operation as hazy and blurred, at least six patients had vivid recollections. Four of these patients recalled being transported back from the operating room and being lifted on to the bed, and all four said that this was the time of most intense pain. Two of them were Yugoslav, and they used similar descriptions of "being torn apart" - as did Mrs G.F. (an Anglo-Australian) who described her time of most intense pain as follows:

> ...pain wise the biggest thing I can remember is being moved from the trolley after the operation and onto the bed...why they have to move you in absolute pain - that really stands out...I felt as if I was being torn apart...I remember it being a flat trolley, and I knew I was uncomfortable, but just the movement of the body, of the abdomen there..., naturally, three people lifting you is just not good enough! My body was not kept rigid enough, and it was the movement, or those people being out of kilter with one another, putting me on the bed...I felt that pain; and I also thought it was wrong that they didn't have an injection there for me. I am sure that my doctor, the anaesthetist and the sisters...would have known how painful my operation was; if they were planning to give me Pethidine they should have given it to me before that, or they should have had it at the bedside ready to give it. You know, my husband had to go and look for someone to get me an injection after I'd cried for ten minutes about the pain.

The experience of the first post-operative day, the period of the most severe pain, was used by many as a gauge of their improving condition on subsequent days. For example; "It still hurts, but it is not as painful as that first day after the operation." Four patients mentioned that bouts of vomiting intensified the pain, while three others commented that being awake because of the pain during the first night was particularly distressing and made coping with pain more difficult.

Fourteen others (nine Anglo-Australians and five Yugoslavs) were rather less specific in their recollections. Some reported similar severity of pain for the first two or three post-operative days (taking verbal self reports and analogue scale ratings into account) so that their retrospective evaluation coincided with the earlier indications of the intensity of pain. On the other hand,

several seemed to have difficulty in remembering not so much their experience of pain generally, but the variations in pain intensity in relation to time. While one person was unsure about the period of the most intense pain, five other patients were quite specific in identifying the fourth, fifth, or sixth day as the period of the most severe pain (see Figs 5.1, 5.2, and 5.3).

During the final interview patients were asked to indicate what they considered to have been the overall amount of pain they had experienced. The distribution of patients according to the retrospective estimate of overall pain is shown in Figs 5.4, 5.5, and 5.6. While nine patients (27.2 percent) indicated that they had experienced a small or moderate amount of pain, 14 (42.4 percent) reported that they had experienced a great deal of pain. Another nine patients (27.2 percent) stated that, because of the considerable variation in pain over time, they were unable to summarise the experience, except to say that the pain varied from severe and constant on some days to minimal pain on other days.

In summary, it can be seen that all patients in the study group experienced some post-operative pain and that most of them (over three-quarters) experienced what they described as severe pain at some stage during their recovery. While there were some variations, the first post-operative day stands out as the period during which the greatest number of patients indicated that their pain was severe and constant. Both the number of patients reporting pain, and the reported intensity of pain by individual patients, declined over time.

The fact that 40 percent of the patients identified some time within the first 24 hours as the period of worst pain, and that some remembered the immediate post-operative period in vivid detail, would appear to support Hannington-Kiff's (1974) suggestion that patients may experience considerable post-operative pain which can, at least in part, be attributed to rapid recovery from general anaesthesia. Thus, while it can be said that pain experienced by patients in this study followed the typical trajectory for post-operative pain described in the literature (Smith et al, 1971), one can also question whether the intensity of pain at any given time was unavoidable and therefore the inevitable outcome of surgery. This last point will be considered further in Chapter 6, in relation to the relief of pain.

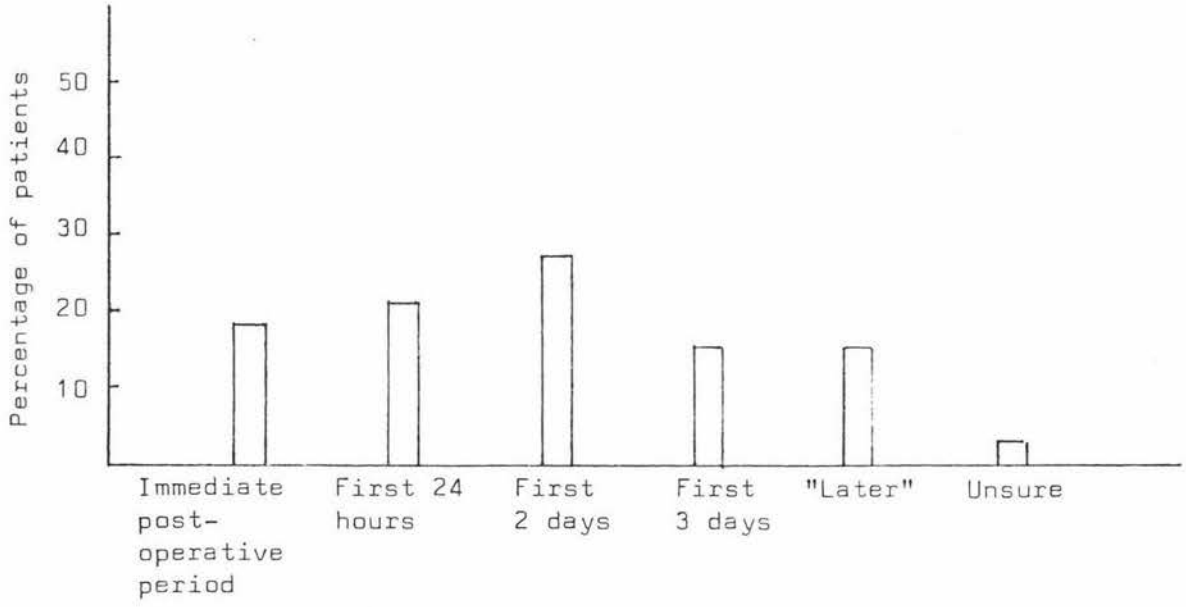

Fig 5.1 Percentage distribution of patients according to the post-operative period of most severe pain (total group)

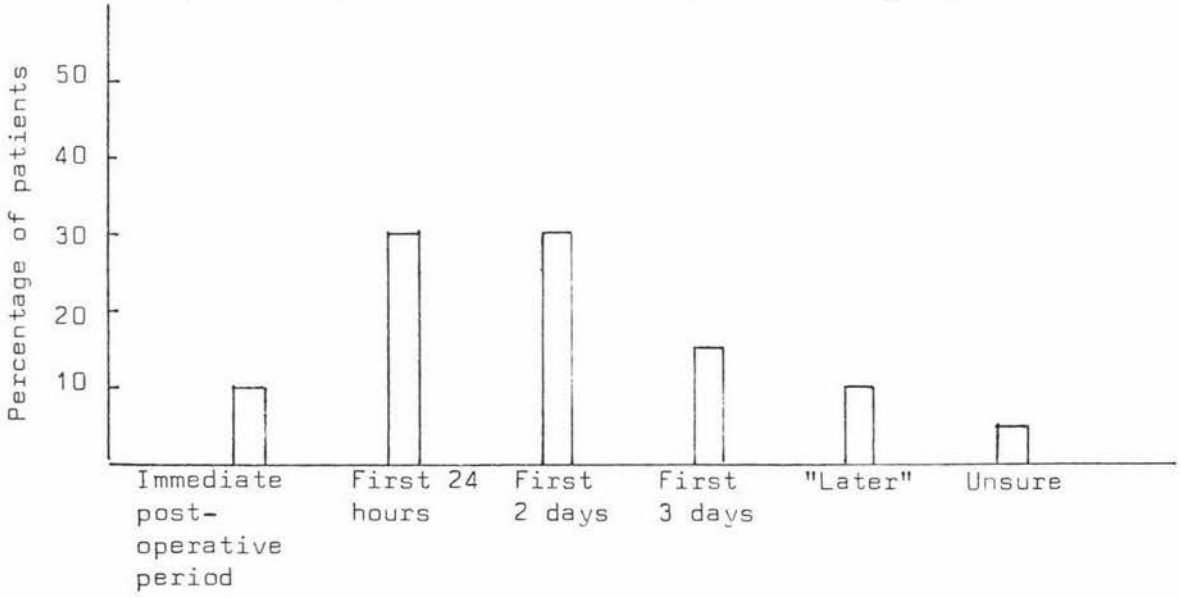

Fig 5.2 Percentage distribution of Anglo-Australian patients according to the post-operative period of most severe pain

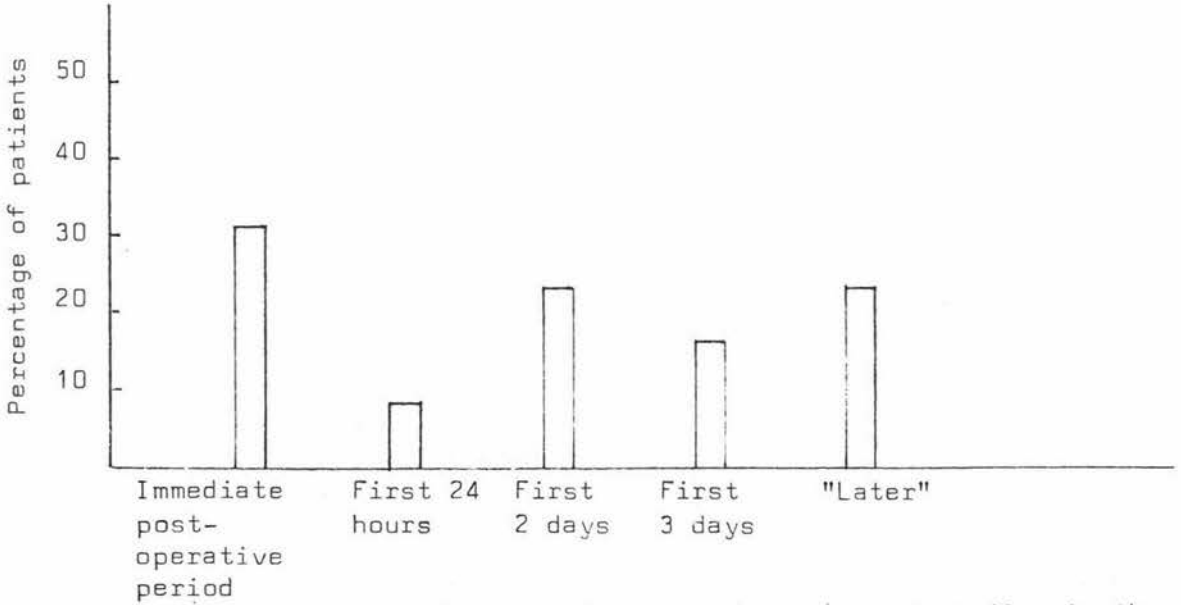

Fig 5.3 Percentage distribution of Yugoslav patients according to the post-operative period of most severe pain

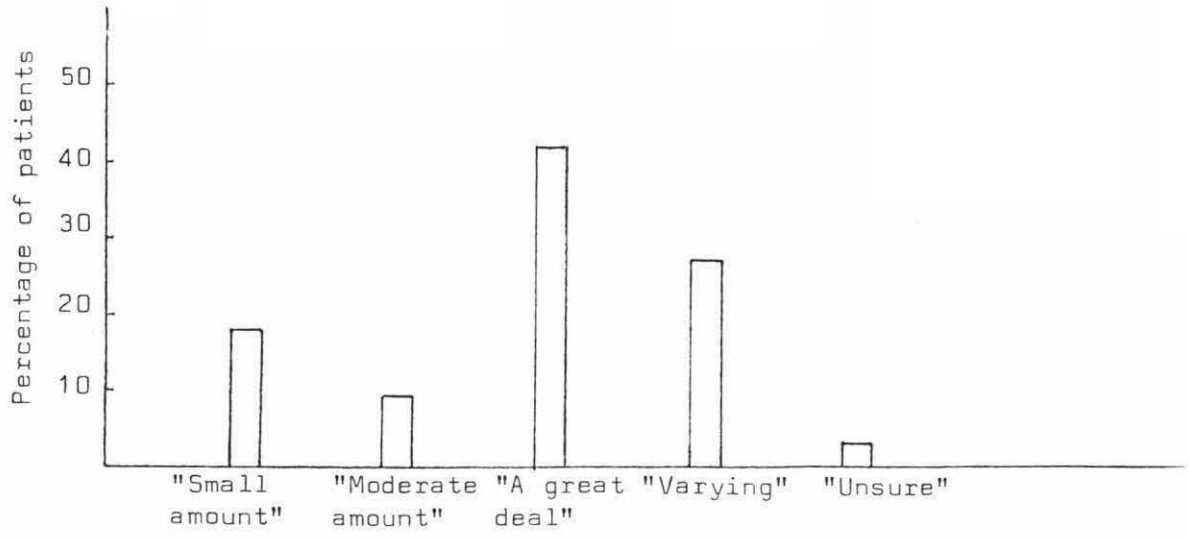

Fig 5.4 Percentage distribution of patients according to the retrospective evaluation of the amount of pain experienced (total group)

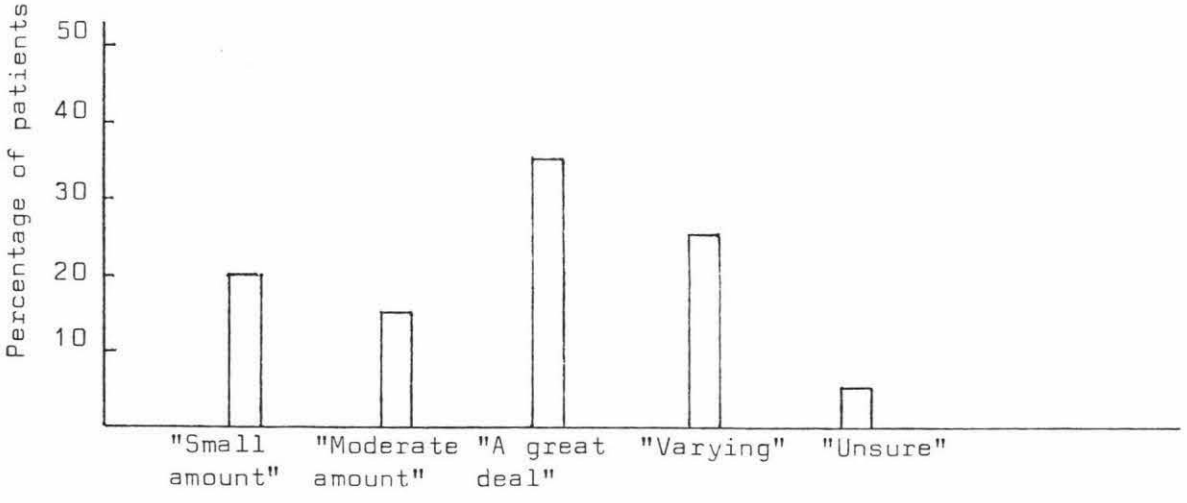

Fig 5.5 Percentage distribution of Anglo-Australian patients according to the retrospective evaluation of the amount of pain experienced

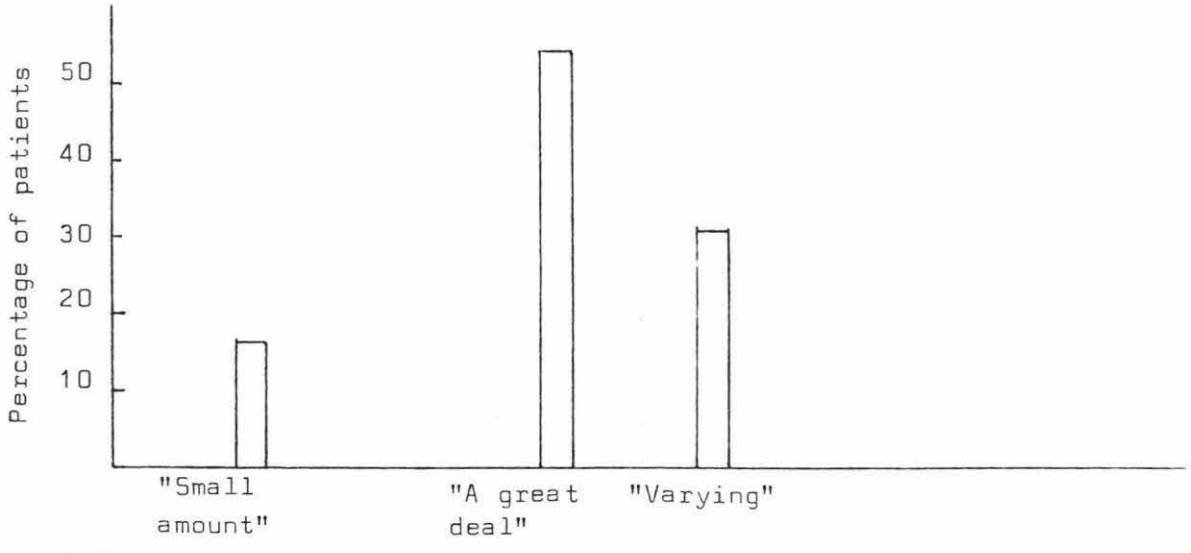

Fig 5.6 Percentage distribution of Yugoslav patients according to the retrospective evaluation of the amount of pain experienced

DURATION OF PAIN

The second question which the study addresses itself to is as follows:

What is the duration of post-operative pain following abdominal surgery?

All 33 patients in the study reported some pain during the post-operative period. During the first post-operative day, the majority of both Anglo-Australian and Yugoslav patients reported their pain to have been of severe intensity, and the remainder reported pain of at least moderate intensity. While one Anglo-Australian reported having no pain on the second post-operative day, he did report pain on the following day. It was not until the fifth post-operative day that patients consistently started to report absence of pain, a pattern which continued in the days that followed (see Fig 4.12). Overall, more Anglo-Australian than Yugoslav patients reported having no pain. By the time of their discharge from hospital, seven Anglo-Australian and three Yugoslav patients reported themselves to be free of pain. In other words, 23 patients (70 percent) were discharged from hospital still experiencing some degree of pain.

While it is true that 70 percent still reported some pain on discharge from hospital, most of them described the pain at this time as quite different from the pain they had experienced earlier. The pain experienced during the early post-operative period was often referred to as "the real pain"; it was severe, present on rest as well as movement, deep, and affecting more than the incision line. The majority of patients reported that they needed analgesic drugs in order to cope with this type of pain. Once the wound drains were removed and patients were able to pass flatus they tended to report a change in the quality of their pain. The feeling of tightness, pulling, and sharp, cutting sensations tended to be replaced with (what patients described as) a more low-key feeling of soreness, tenderness, or aching. There was also a tendency for patients to describe the pain as more superficial and restricted to the area of incision. The exceptions to this were three patients who had undergone surgical operations involving extensive excision (e.g. for invasive carcinoma of the colon) or extensive freeing of adhesions. While these patients reported a decrease in the intensity of pain, the quality apparently went unchanged, as shown in the following comment:

> I still feel it in the lower side there...in the left side. It's just inside, just like a nagging pain. It's not hurting as much now, but it's something similar to what I had...I don't think it changed much.
>
> (C.A., Anglo-Australian male, 14th post-operative day)

The time when the change in the quality of pain occurred varied between patients from the first post-operative day to five or six days after surgery. For the majority of patients the change occurred on the third or fourth day. In most cases, it meant that they no longer felt the need for narcotic analgesics and could tolerate the pain with the help of milder analgesics. For a number of patients this time coincided with an increase in physical activity (e.g. walking), improvement in appetite, and improved sleeping patterns. Not surprisingly, therefore, patients tended to express feelings that they were "on the mend", or had "turned the corner". While there were exceptions, most of the Anglo-Australian patients also began to apply different terms to what they had until then called "pain". Thus, one of the patients stated:

> ...now I haven't got any pain, I have a very tender soreness, but it's not painful pain, it's just uncomfortable.
>
> (A.R., Anglo-Australian female, 8th post-operative day)

A Yugoslav patient, however, speaking on the 4th post-operative day, described her pain in the following terms:

> ...when I move suddenly, it's the same sort of pain I had before, but of course it's not as sore as in the very beginning. But now it's different, now when I walk...it burns, it's different. It feels like...when you scorch yourself...that stinging sensation? That's what I've got now, it feels like that. When I walk it still feels sore and I still feel very heavy, my stomach feels very heavy down there, it still hurts....It's not as strong as it was before, it's lighter. I can take it now.
>
> (E.V., Yugoslav female)

Thus, while Yugoslav patients also described a decrease in the intensity of pain and sensory changes related to the quality of pain, even those who spoke English (E.V. quoted above) nevertheless continued to use the term pain. Eventually, some patients reported a

definite absence of pain, even though certain sensations persisted or replaced pain. The following two examples were typical of those patients who reported that they had no pain at the time of the final interview:

Researcher: Do you have any pain now?

Patient: No. I haven't had any Panadol since yesterday morning...there is no pain. I know I've had an operation...there is a presence there, I know that there is something inside not quite...it's a heavy feeling, it's a numb, dragging feeling, but it's not pain.

(G.F., Anglo-Australian female, 7th post-operative day)

Researcher: Do you still have pain?

Patient: No, I have no pain.

Researcher: When did your pain stop?

Patient: After four days. After four days the pains stopped. After the wound...when the wound was ready... the wound feels like a wound...it hurts even now, it is not healed yet, but the pains went after four days.

(I.L., Yugoslav female, 8th post-operative day)

The majority of patients, however, did report pain at the time of the last interview. There was an overall tendency to see such pain as more of a nuisance than a source of distress. Most commented that they no longer felt immobilised by the pain and many felt that the pain was well within their capacity to tolerate it, as shown in the following comment:

Researcher: You've mentioned that you still have pain. How much pain do you still have?

Patient: Oh, quite a lot, although I can move much more freely, so there is definitely an improvement, but see, it's paining actually today, just where they took the stitches out, all the time. And then it still is painful to make certain movements... it's still there the nuisance, still stopping me from doing things. I am still sort of not completely healed ...but it's bearable now because I can do so much more...

(J.B., Anglo-Australian female, 7th post-operative day)

In summary, therefore, it can be said that for a very small number of patients post-operative pain lasted only four to five days. The majority of patients (70 percent), however, who left hospital after an average of 9-12 days of hospitalization, still reported some pain at the time of the last interview. None of those who reported pain at the time of the last interview indicated that they were distressed by it, although the pain was preventing them from engaging in some types of activities. While a greater number of the Anglo-Australian patients reported having no pain, the differences between the Anglo-Australians and Yugoslavs were not marked. These findings reflect the pattern of pain duration recorded by others (e.g. Fagerhaugh and Strauss, 1977), but also suggest that while the more severe pain recedes after some three to five days, some degree of pain may persist for a considerably longer time.

QUALITY OF PAIN

The third question which the study addresses itself to is as follows:

What is the quality of the pain experienced and how do patients express the qualitative characteristics of pain?

As already discussed, patients reported variations in the intensity, duration, and location of their pain. Similarly, there were variations in the quality of pain. As well as pain which patients associated with the surgical wound, many patients also reported "wind" pains, i.e. pain associated with intestinal distension due to the inability to pass flatus. Some patients also reported pain "under the ribs", "behind the shoulder blade", backache and headaches.

It can be seen, even if the discussion is restricted to the pain in the abdominal area, that patients employed a large number of terms to describe their experience. As shown in Table 5.1, Anglo-Australian patients used a total of 60 different descriptive terms. Classification of the terms used into the three basic categories proposed by Melzack and Torgenson (1971) shows that slightly over half of the words used (51.7 percent) were in the sensory category, 28.3 percent in the evaluative category and 16.7 percent in the

TABLE 5.1 Distribution of pain descriptive terms used by Anglo-Australian patients

Dominant word category	Number of patients using the words										Total
	19	10	8	7	6	5	4	3	2	1	
Sensory	sore	tender	pulling	aching	deep	dull	sharp tearing		hurting ripping stinging pinching grabbing dragging	blunt numb heavy superficial cutting biting gripping catching scraping scratching twisting smarting muscular throbbing brewing cramping colicky	31 51.7%
Affective					bad				awful dreadful	placid nasty shocking vicious exhausting "sicky" wicked	10 16.7%
Evaluative						unbear-able	terrible	moderate bearable strong	niggling uncomfortable severe agonising excruciating	weak normal nagging bothering intense terrific horrible	17 28.3%
Miscellaneous										amorphous travelling	2 3.3%
Total	1	1	1	1	2	2	3	3	13	33	60 100%

affective category. Yugoslav patients, on the other hand, used only 37 different descriptive terms with similar numbers in the sensory and evaluative categories and a smaller number in the affective category (see Table 5.2). As the distribution of pain descriptive terms in Tables 5.1 and 5.2 indicates, however, both Anglo-Australian and Yugoslav patients were relatively individualistic in their use of words, with more than half of all the words being used by only one patient. Only a small number of words were shared by more than one third of each group. The most commonly used words among the Anglo-Australians were, 'sore', 'tender', 'pulling', and 'aching' - all four words belonging to the sensory category. Among the Yugoslav patients, on the other hand, the four most commonly used terms were 'jaki',[1] 'peče',[2] 'strašni',[3] and 'teški',[4] only one of which could be classified as a sensory term.

To sum up, an analysis of the terms used by the patients revealed two distinct patterns. First, the Anglo-Australians tended to use a greater number of different terms (the mean for the group was 7.35 and the median 6.17), and also to use predominantly terms belonging to the sensory category (see Table 5.3). Second, Yugoslav patients tended to use fewer descriptive terms (the mean was 5.15 and the median 5.0), and terms predominantly evaluative in nature (see Table 5.3). The findings related to Anglo-Australians are in line with the analysis made by Fabrega and Tyma, (1976a), and discussed in the literature review, when they stated that the English language is particularly rich in secondary pain terms which are used to qualify primary terms (such as pain or hurt), or can be used instead of them. Without comparable literature sources, it is not possible to state whether the smaller number of terms used by Yugoslav patients reflects the smaller repertoire of the individuals concerned, or the language generally.

At various times during the study, many of the patients described the quality of their pain by comparing it to a past experience (e.g.

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1 May be translated as 'severe' or 'strong'.

2 May be translated as 'burning'.

3 May be translated as 'horrible' or 'dreadful'.

4 May be translated as 'severe' or 'hard'.

TABLE 5.2(a) Distribution of pain descriptive terms used by Yugoslav patients (original words used)

Dominant word category	Number of patients using the words						Total
	6	5	4	3	2	1	
Sensory		peče (burning)*		oštri (sharp)*	žiga probada raspinje kida	tupi bocka reže stišće steže čupa grčevi sore) deep)* stinging)	16 43.2%
Affective			strašni	tišti	užasni	opasni killing)* awful)	6 16.2%
Evaluative	jaki		teški	izdržljivi neizdržljivi	lakši nepodnošljivi	normalni dosta veliki silni podnošljivi neopisivi natural) terrible)* unbearable)	15 40.6%
Total	1	1	2	4	7	22	37 100%

* English words used by the two subjects
who spoke English rather than Serbo-Croat throughout the study

TABLE 5.2(b) Distribution of pain descriptive terms used by Yugoslav patients (English translation)

Dominant word category	Number of patients using the words					
	6	5	4	3	2	1
Sensory		burning		sharp	pecking (like that by a sharp bird's beak) piercing stretching tearing	blunt stinging (pricking) cutting crushing (pressing) tightening (pulling) wrenching (tearing) cramping
Affective			horrible (dreadful)	weighing down (oppressive)	terrible (ghastly)	dangerous (strong)
Evaluative	strong (severe)		severe (hard)	bearable unbearable	lighter (easier) unendurable (unbearable)	normal sufficient great strong endurable (bearable) indescribable

TABLE 5.3 Distribution of Anglo-Australian and Yugoslav patients according to the dominant word category used to describe pain

Dominant word category	Anglo-Australians		Yugoslavs		Total	
Sensory	18	90%	3	23.1%	21	63.6%
Evaluative	0	0%	7	53.8%	7	21.2%
Sensory and Evaluative	1	5%	2	15.4%	3	9.1%
Sensory and Affective	1	5%	1	7.7%	2	6.1%
Total	20	100%	13	100%	33	100%

child birth) or an imagined event. In this sense the descriptions tended to reflect the definition for pain proposed by Merskey (1973), and used for the purposes of this study, i.e. that pain is an unpleasant experience which we primarily associate with tissue damage and/or describe in terms of such damage. The majority of Yugoslavs and Anglo-Australians compared the pain to some form of either sharp or blunt injury (see Table 5.4) while smaller numbers used other comparisons.

TABLE 5.4 Distribution of Anglo-Australian and Yugoslav patients according to comparison of pain with other events

Type of comparison	Anglo-Australians		Yugoslavs	
Sharp injury	8	40%	5	38.5%
Blunt injury	6	30%	4	30.8%
Disembowelment	3	15%	2	15.4%
Repair of body	2	10%	1	7.7%
Other	5	25%	2	15.4%

(The totals in Table 5.4 exceed 100 percent as some patients provided more than one comparison for pain)

Responses from Anglo-Australian patients which were categorised as comparing pain to a sharp injury included the following:

"...like a knife sticking in";

"...like a screwdriver...turning inside";

"...it was like sitting on a fork."

Yugoslav patients in this category used similar imagery.[1]

When comparing their pain to a blunt injury patients from both groups referred to being "punched", or "bruised", or having a heavy object "crushing" part of the body. In addition, three Anglo-Australian and two Yugoslav patients provided rather graphic descriptions of their pain which have been categorised as comparison with disembowelment. Typical comments were:

> "...like being torn apart and your insides pulled out."
>
> (N.C., Anglo-Australian female)

> "...as if I was going to break open."
>
> (E.V., Yugoslav female)

Unlike a number of other patients, who had a fear that "if you coughed hard enough your guts would spill out" (A.A., Anglo-Australian female) but did not associate such fear with pain, the five patients mentioned above used the descriptions of disembowelment only in relation to pain.

In the later stages of their recovery, two Anglo-Australians and one Yugoslav compared their pain with less unpleasant feelings - describing it as "a good sign". The description used by the Anglo-Australian patients was, "...like the body knitting itself together", while the Yugoslav patient compared it with "...something crawling (such as small insects) - as if the muscle is being joined to muscle."

And finally, among other descriptions, used during various stages of recovery, patients compared their pain with "giving birth" (two Yugoslav females), "indigestion", "nausea", "running a mile and getting a bad side" (three Anglo-Australian females), and "hell" (two Anglo-Australian males).

In addition to their perceptions of pain as being basically unpleasant, and in many cases being compared with some form of tissue injury, several patients highlighted the threatening quality of their

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[1] The actual expressions used were:

"kao da bode iglama"; "kao da neko stisnuo i bode";
"kao da se malo više posečete sa nožem"; "kao sa šarafom da vrti".

pain. Although such threats were seen as transient, patients nevertheless tended to spontaneously recall these aspects of their pain experience in the final interview. Two Yugoslav and one Anglo-Australian patient, for example, stated that at times they felt that the pain was threatening their sanity. As one patient expressed it:

> Pain is momentary. At times it gets so that it's unbearable....If such pain became constant, then indeed one would not be able to stand it. At times it feels as if one will go mad. You think you will die, but then it eases...
>
> (S.Q., Yugoslav female)

Or, as another patient described his experience of waiting for a doctor to order some form of analgesia for him late on the first post-operative day:

> ...I'd say it (the pain) was building up because I was getting mentally disturbed because I couldn't relax, and I was sitting there at 11 o'clock at night, everybody was apparently asleep...and I'd say, 'when is this ever going to finish? Is it going to finish? Am I going to go idiotic first?...Is there going to be an end to it?'...this is when I didn't think the intern was coming down...
>
> (R.P., Anglo-Australian male)

As in the case of patient S.Q. quoted above, five patients (four of whom were Yugoslav) provided comments about their experience of pain which linked pain with a threat of, or a desire for, death. One patient, for example, described her experience of waiting to be catheterised for urinary retention in the early hours of the first post-operative day when she had severe pain:

> I felt that I had to urinate, but I couldn't. The sisters didn't hurry, while I felt that my bladder would burst. That night I thought 'I haven't died so far, but I surely will from this'....Apart from that everything was fine.
>
> (D.Y., Yugoslav female)

Two patients, on the other hand, linked their experience of post-operative pain with a wish to die, as in the case of the following patient who, when asked to describe her pain, stated:

> I don't think you can ever explain it. Not at all, because it's so bad that you no longer want to live. I want to die, I don't want to live...
>
> (Z.C., Yugoslav female)

In summary therefore, it can be seen that in order to describe the quality of their pain, the patients in the study used a large number of descriptive terms. In spite of the considerable variety of individual words used, most Anglo-Australian patients used predominantly sensory terms, while Yugoslav patients tended to use evaluative terms. In order to describe the quality of their pain most patients tended to compare it with some form of tissue damage or injury. A smaller number of patients (predominantly Yugoslav) also described the pain as threatening their sanity and life, or evoking a desire to die. While the study did not focus on patient-staff interaction, one point of particular relevance to this section gradually became clear. In their description of pain, both to the researcher and to hospital staff, the Anglo-Australian patients used terms such as "sore", "tender", and "aching", as a substitute for the word "pain". They were thus able to convey more directly the gradual diminution of pain. The Yugoslav patients, on the other hand, have only one key word at their disposal, that of "bol" (meaning "pain"). It was observed that in their dealings with the staff when they were required to communicate in English, Yugoslav patients tended to use the term "pain" rather than any of the other core words available. When speaking in their own language, Yugoslav patients were able to elaborate quite freely and thus convey with greater clarity the nature and severity of their pain. When speaking in English, however, most of them were hindered by a limited vocabulary and lack of idiomatic expression, so that they tended to label as "pain" even those feelings which other patients may have labelled as "ache", or "soreness". Such difficulties in communication have implications for both research and clinical practice and will be considered in the final chapter of this report.

While most research studies continue to focus on the neuro-physiological aspects of pain and even clinical studies tend to concern themselves primarily with its intensity and relief, it is difficult to find comparisons in the literature for the qualitative aspects of pain described in this section. One point amply illustrated here is that

for the experiencer, pain is much more than an unpleasant sensation - it conjures images of bodily injury and harm, and brings feelings of threat to one's integrity and even survival. Patient descriptions of their pain can be seen therefore to be akin to the way some psychoanalysts (e.g. Szasz, 1957) have defined pain as primarily an affect, a warning of the danger of the loss of a part, or whole, of the body.

PAIN RELATED BEHAVIOURS

The fourth question to which the study addresses itself is as follows:

What behaviours do patients in pain exhibit, and what underlying attitudes can be identified for such behaviour?

As discussed in Chapter 4, observations of the patients revealed that they exhibited a variety of motor, vocal, verbal, and social behaviours. Quantitative analysis of the data indicated considerable similarity between the Anglo-Australian and Yugoslav groups, particularly in relation to the motor and vocal behaviours. The Yugoslavs, however, exhibited a slightly higher number of verbal behaviours while the Anglo-Australians had a slightly higher number of social behaviours.

Motor Behaviours

The greater number of motor behaviours (when compared with other categories of behaviour) in the total study group, as well as the similarities between the two subgroups, may be explained by the fact that many of the motor behaviours observed are relatively automatic and therefore less under the influence of either the individual's conscious control or cultural prescription. Thus, regardless of whether they wished to show or conceal their experience of pain (or anxiety), most patients exhibited signs of facial tenseness or rigidity of posture during the post-operative period.

It is interesting to note that even during the pre-operative period motor behaviours were observed among many of the patients (see Fig 4.1). Since most patients were in fact free of pain prior to surgery, the observation points to the widely acknowledged fact that there are no pain-specific responses (see discussion, page 26). In

the pre-operative period such behaviours tended to be associated with anxiety, rather than pain.

There were, nevertheless, some differences between the types of behaviours observed pre- and post-operatively. While facial tenseness[1] was the most frequently observed motor behaviour both pre- and post-operatively, in the pre-operative period patients also showed signs of restlessness.[2] Very few patients were observed to be perspiring, clenching their hands or biting their lips. In the post-operative period, however, particularly during the first three days, very few patients showed signs of restlessness but more were observed having sweaty or clammy skin, clenching their hands, or biting their lips. The majority of patients assumed a rigid posture,[3] lying very still while in bed, or adopted slow, deliberate, and careful movements when ambulating. While most patients seemed only minimally aware of behaviours such as hand clenching or facial tenseness, they were acutely aware of the discomfort from clammy, sweaty skin, which they attributed to outside weather conditions rather than to their experience of pain.

It may be argued that rigid posture and lack of movement are unconscious responses that serve the function of protecting the patient from further pain. During the study it also became clear that, for most patients, lack of movement and maintenance of a rigid posture was a deliberate coping strategy. Within hours of waking up from the anaesthetic, most patients were aware that lying still minimised the sensation of pain, while straining to sit up, roll over, or reach for a glass of water, deep breathing and coughing, or other movement resulted in severe pain.

The realization that their physical actions could influence the intensity of the pain, gave some patients a sense of control over the experience. As one patient explained:

---

1 "Facial tenseness" was indicated by frowning, tightening of the muscles around the jaw and mouth, failure to smile appropriately, etc.

2 "Restlessness" was indicated by frequent changes of position in either chair or bed, crossing and uncrossing feet or legs, slight rolling of the head, body, or limbs from side to side, repetitive touching or scratching of head, neck, or body, or picking up of objects such as a box of matches and placing them down frequently.

3 "Rigidity of posture" was indicated by the patient sitting or lying with feet and knees close together, with muscles generally tensed, and without moving.

> ...once I stopped vomiting I only had the pain over the incision with movement, and it was something I had some control over, because, if I didn't move, I didn't get it...
>
> (J.B., Anglo-Australian female)

However, patients also discovered that regardless of how they felt, there were certain activities which had to be undertaken and which caused pain. While aware of the need for post-operative exercises, for example, patients frequently failed to perform them. As one Anglo-Australian female (A.R.) explained on the first post-operative day:

> The coughing and the exercises make the pain much worse. Don't even mention them! I just don't even think about doing them, it hurts too much. When the nurse tells me to do them, if she stands over me I do it, but not at other times....I feel the quieter and the stiller you lie, the better you feel.

Yugoslav patients expressed similar feelings and showed similar reluctance to engage in activities likely to result in pain. Commenting on the severity of her pain, and the resentment she felt at being told to do her post-operative exercises, one patient stated:

> They expect you to just get on with it, but even breathing hurts. I want to take a deep sigh, but I can't. It hurts too much.
>
> (E.V., Yugoslav female)

Patients were particularly sensitive to the timing of staff activities which disturbed their rest periods at intervals regarded as too frequent. None of the patients, however, made more than a mild gesture of trying to object to such interventions, as in the following example:

> You can...roll over into a certain position and oh, you say 'that's beautiful' - next minute they (nurses) got to roll you back over again, and say 'because we've got to do something else to you', oh, I get so... 'can't I just stay here?', you know, you've got to roll back over.
>
> (D.P., Anglo-Australian male)

In summary, both the Yugoslav and the Anglo-Australian patients tended to show facial tenseness and rigidity of body posture when in

pain. To a lesser extent they were also observed to have clammy or sweaty skin, to clench their hands and to clench their teeth or bite their lips. Such behaviours were particularly pronounced during the first three post-operative days. For the most part, patients appeared to be either unaware of engaging in such behaviours or failed to connect them with the pain they were also experiencing. All 33 patients, however, commented that movement produced or increased pain and most were observed lying very still and maintaining a rigid body posture, particularly when in severe pain.

Vocal Behaviour

It can be expected that at least some people in pain will cry, groan, moan, grunt, or scream as the result of such experience. People in pain may also try to suppress, or hide such behaviours. In this study, only a third of the total group showed such vocal behaviours, while a similar number showed signs of suppressing such responses. There were similar numbers of men and women, and Anglo-Australians and Yugoslavs among those patients who moaned or groaned during the post-operative period. Such behaviour was more common immediately following the return from the operating room and the first post-operative day when patients were recovering from the general anaesthesia or were under the influence of strong narcotics. Whenever such behaviours were observed, patients tended to lie very still, frequently holding on to their abdomen, and moaning or groaning in low, subdued tones. Overall, however, such behaviours were observed in only a small number of patients, and only over a limited period of time. Much more frequently, patients were observed to breathe shallowly, with short, "catching" inspirations, and forced, grunting expirations. The latter behaviours were observed particularly during the first two days after surgery and on movement such as getting in and out of bed at later stages.

Of all the vocal behaviours, crying was the most frequently observed. While none of the men cried, six Anglo-Australian and five Yugoslav women had at least one episode of crying, four of them both pre- and post-operatively. Most of the patients who cried did so on more than one occasion. In most cases, crying was associated with pain, as in the case of patient G.F. (quoted earlier[1]) or another patient who stated:

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1 See quotation page 115.

> I had such pain on Saturday (third post-operative day), I thought I would die, I couldn't get my breath...that's how much my stomach was hurting. And I cried, and all that, so the sister brought me some tablets straight away.
>
> (S.Q., Yugoslav female)

The comment quoted above is typical, in that the patients who cried saw their pain as severe and distressing. They also recognised the crying as an open acknowledgement of pain and as a request for help. While pain was the most frequent reason for crying, patients also cried when recalling the pain of the previous night or the pain that had occurred a few hours before. Several also cried for other reasons, such as when their families failed to visit (three Yugoslavs), or when upset by outside events (two Anglo-Australians). None of those who cried did so loudly, although on several occasions two (Anglo-Australians) were observed to sob audibly. In most other instances, patients cried very quietly, turning their head into the pillow and having tears welling up in their eyes, but without making much sound. Thus, while a number of patients cried either because of the pain, or for other reasons, neither the Anglo-Australians nor the Yugoslavs were particularly demonstrative in such behaviour.

Verbal Behaviour

While patients in acute pain may not have complete control over their motor or (to a lesser extent) their vocal behaviours, verbal behaviours such as complaining,[1] talking about pain,[2] asking for help,[3] cursing, or pleading are more able to be controlled by the individual.

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1 "Complaining" was indicated when verbal statements contained more than a report of pain, e.g. comments that pain was distressing; that pain was beyond the patient's tolerance level; that analgesics did not provide adequate relief from pain; or that relief measures were inadequate. Complaints about other aspects of care were also considered to be relevant.

2 "Talking about pain" was indicated when verbal statements focused on pain, its intensity, quality, location, and/or duration, and were made spontaneously either to the investigator, hospital staff, visitors, or other patients, particularly when there was a tendency to dwell on the topic of pain.

3 "Asking for help" was indicated when verbal statements were made requesting specific forms of relief (e.g. medication), assistance with physical tasks (e.g. sitting up in bed), or more general requests for help (e.g. statements such as 'please do something'. or 'can you do something about this pain?').

Verbal behaviours also reveal more directly the underlying attitudes to pain. Overall, the Anglo-Australian patients tended to complain and to ask for help more frequently than the Yugoslavs who tended to talk about the pain, particularly to the researcher.

The following example may illustrate the complaining behaviour:

> (The patient was describing her experience on the third post-operative day after bouts of vomiting on the first post-operative day, interrupted sleep during the previous two nights, and what she described as "a lot of pain" since the operation).
>
> I feel sore and tired. The pain is...well, there are times when there is no pain at all and then...it gets so it's absolutely unbearable...I think I have overdone things today (washed and set her hair) and now I am suffering for it....The doctor started me on antibiotics today, but I've only had one today. I mean he wouldn't just give me one, would he? ...I feel sore all over, I don't know whether it's the bed or what, but I feel quite sore, especially in the back...I've been trying all day to get some rest and they (staff) always find something to do. They just will <u>not</u> let me rest today, and I really don't feel better.
>
> (A.R., Anglo-Australian female)

None of the patients in the study were observed to complain continually. Such behaviour was limited to one or two days, particularly during the early period of recovery, or even to single incidents. In most cases complaints were related to the timing and administration of analgesic medication. In the following example the patient was describing the events of the previous night, part of the first post-operative day, when unable to get to sleep because her pain had got worse and she "could no longer bear it", she asked for an injection. (Reportedly, she was told by the night nurse, "Sorry dear, but you will just have to suffer until we can give you another injection.").

> So I was left in agony for two hours until the four hours were over...when they finally gave me the injection I slept without a break for three hours....I felt that was silly. I really think they could be a little more flexible...
>
> (G.F., Anglo-Australian female)

Requests for help made another category of verbal behaviours.

Patients were observed asking for help during the first two days after surgery, and such behaviour became rare after the fourth post-operative day. There was an even division of patients into three groups - those who readily asked for help, either with activities such as getting in and out of bed, or by asking for analgesic medication; those who tended to wait until the pain became quite severe before asking for help; and those who made no requests for help, but in some cases accepted such help when it was offered.

Among the 11 patients who readily asked for help there were only two Yugoslavs (both females) and only one Anglo-Australian male, the remainder being Anglo-Australian females. Mainly, these patients commented that they saw no point, or virtue, in waiting until the pain "became really bad", and some also commented that by taking the initiative and asking for help they were able to obtain a more satisfactory control of pain. In most cases they appeared to be particularly well informed about the pharmacological management of post-operative pain, either through their professional training or past experience of pain. The following example is a good illustration:

> ...in fact, I knew exactly when I had them (injections of Omnopon), after the first night...and I knew that if I had one at 10 o'clock I could have one at 2 o'clock. Apart from that I knew there wasn't any point asking for it before, so I'd ask the nurse at two and she'd say, 'Oh, I'll check', and she'd come back with it. I knew I was well within my rights and there wasn't any point...in asking for it before hand, and there was no point in waiting, you know, that I could have it then and I was going to. I wasn't scared about becoming addicted to it or anything like that. So, I just thought that...I was going to make this as pleasant as possible for myself and this was the way to do it...I was getting it spot on, as far as I was concerned, four hours or maybe even three and a half....But no,... they didn't, I don't recall them offering anything for pain. I had to ask, in fact, I think I've always had to do that...
>
> (A.A., Anglo-Australian female)

The requests for help were not always met with the kind of action desired by the patient. When a request did not meet with the

desired result some patients felt that they were forced into a more drastic type of behaviour, as the following example illustrates:

> ...when my husband came to visit, I got this sudden pain, I couldn't catch my breath.... From down here (pointing to the pelvic area) to the heart, so I couldn't catch my breath. So I called this boy (male nurse)...'please, may I have some tablets for pain', but he said 'when sister comes round with the (medication) trolley she will give you some.' So I told him, 'if I wait for her I am going to <u>die</u> before she arrives.' And of course, he brought be some tablets straight away.
>
> (S.Q., Yugoslav female)

While some patients asked for help and tried to ensure that they received it as quickly as possible, others delayed asking for help. This group contained five Yugoslav females and five Anglo-Australians (three females and two males). Typically, such patients tended to wait until the pain became severe and they felt unable to tolerate it any longer, before asking for help. The following example is quoted since it illustrates the patient's attempts to cope with pain by using his inner resources, but also shows the limits of such resources so that the patient still had to ask for help:

> ...some nights you think 'oh God, what have I done to deserve this sort of thing?', and you get a nervous sort of thing, and it will go away. Just complete relaxation sort of thing. You feel the pain draining out of your body. Then when it comes back on again, you know what you are gonna cop again, and you are dreading it sort of thing. And, sort of, grit your teeth and try to take it, and take it, and take it, and then you've just got to, you can only take so much, then you've just gotta say to them, 'well, I've gotta have another needle', and that's it, 'put me out again' sort of thing...
>
> (D.P., Anglo-Australian male)

Finally, there was a group of 12 patients who were neither observed asking for help nor did they report such behaviour. The group included five Anglo-Australian males but only one Anglo-Australian female. It also included the one Yugoslav male and five Yugoslav females. One common factor among this group of patients was their greater acceptance of pain with a "matter of fact" attitude.

While a few patients made more or less successful attempts to hide or suppress signs of pain, the majority who did not ask for help readily admitted to being in pain and a number of them openly expressed their pain either verbally (with prompting) or non-verbally. In the following example, the patient was commenting about the previous night (fifth day after surgery) when he had experienced the pain he considered as the most severe since his operation:

Researcher: ...what happened last night when you had the pain? Did you ask for anything?

Patient: No, I just suffered it.

Researcher: Did you tell anyone about it?

Patient: No...well, I don't like worrying people, even if I was home, I probably wouldn't have told anybody.

Researcher: So you prefer to keep it to yourself?

Patient: Yes, suffer it, you know, and get over it that way.

(C.A., Anglo-Australian male)

The calm, "matter of fact" attitude towards pain, common to this group of patients, was particularly striking in two Yugoslavs. They accepted any medication offered and cooperated willingly with anything that was required of them, but did not complain or ask for help at any stage. While their command of the English language may have been an important factor as far as the staff were concerned, they were able to talk freely with the researcher. In their comments, they tended to stress the normality of pain, and their acceptance of pain as a normal part of the recovery process. As one of the patients stated with a shrug of her shoulders:

Of course it hurts. When you've been cut it has to hurt, but I can take it....It's no use crying, you have to take it. Getting upset about it would only make it worse.

(W.N., Yugoslav female)

As the discussion so far has indicated, the majority of patients did not complain, either about their pain or other aspects of their experience, and only one third of the patients showed no hesitation in asking for help. There was another small group of patients,

however, who, while neither complaining nor asking for help, nevertheless talked about pain a great deal. This was particularly true of the Yugoslavs who spontaneously raised the topic of pain with the researcher, but were also observed discussing it in detail with their visitors. While such verbalizations may, in some instances, have been indirect requests for help, in most cases they seemed to serve a definite therapeutic function in themselves. In other words, talking about pain served to decrease to some extent the suffering experienced.

It would appear, however, that talking about pain was perceived as therapeutic only when there was an attentive, interested listener. In connection with this, both the Anglo-Australian and Yugoslav patients commented on the continual changes of nursing staff, and therefore lack of individual nurses who knew the patient and were prepared to listen. The staffing patterns of the surgical units used in the study (referred to in the description of the setting for the study, page 64), characterized by a small number of registered nurses and reliance on student nurses to provide much of the basic nursing care, contributed greatly to this situation. There was a tendency, therefore, to perceive nurses as busy and preoccupied. For example:

> ....They come and sit on the bed, look at the TV, and talk to you. But you can't get into anything with a (student) nurse because she is here for a day, you might not see her again...she is off, and that's it. But you can't sort of take her in your confidence... I sort of needed somebody to take an interest in me....I couldn't fault any of the (student) nurses, well, they've just been so marvellous, but they are busy with other patients too. They can't just sit on your bed and talk... they've got to run to somebody else too.
>
> (B.M., Anglo-Australian female)

The Anglo-Australian patients whose families, for whatever reasons, failed to visit daily were observed to use their time with the researcher to talk about their pain to a greater extent than did the patients who had regular and frequent visitors. On the other hand, Yugoslav patients tended to talk about their pain to the researcher, regardless of how regularly their families visited. In the following example, the patient was commenting on the measures

which she found helpful in coping with pain:

Patient: ...and, of course, you helped.

Researcher: How did I help you?

Patient: It's good, you know, when we can talk about it. It's really worthwhile, and it helps me. It's quite different when one can talk about it, otherwise it's hard.

Researcher: ...but did it just make you feel better, or did it really lessen the pain?

Patient: You helped me. It hurt less and I felt better...talking helped...

(K.R., Yugoslav female)

The need for an attentive, interested listener was illustrated by the following patient:

> There is no one here to ask you, no one cares...You (the researcher) want to learn... you want to find out, so you ask like my mother would ask, 'are you in pain?' But no one else asks.
>
> (W.N., Yugoslav female)

As the preceding discussion has indicated, the most common behavioural responses to pain in the verbal category were 'asking for help' and 'complaining', demonstrated mainly by the Anglo-Australian patients, and 'talking about pain', demonstrated by the Yugoslav patients. Overall, a greater percentage of Yugoslav patients responded to pain by using verbal behaviours than did the Anglo-Australian patients (see Chapter 4). The attitudes expressed suggest that the Anglo-Australian patients knew more about the use of analgesics in the management of pain, and wished to reduce or eliminate their feeling of pain by the use of such drugs. Yugoslav patients, on the other hand, tended to verbalize their feelings about pain as a means of sharing their experience with others. They made fewer requests for help and fewer complaints, tending to accept pain as an expected aspect of recovery from a surgical operation.

Social Behaviours

Social behaviours were the second most common category of behavioural responses to pain observed in this study. Responses

such as clinging, social withdrawal, and changes in communication, personal appearance and social manners were observed in a greater percentage of patients than the verbal or vocal behaviours, but in a smaller percentage of patients than the motor behaviours (see Fig 4.1). Except for the fifth post-operative day, a greater percentage of the Anglo-Australians engaged in social behaviours, although the overall difference between the two groups in the study was not marked. A closer analysis of the social behaviours, however, does reveal more marked differences in some areas.

Firstly, changes in social manners were rare. While patients occasionally failed to include phrases such as "thank you" or "please" when making requests or acknowledging help received, there were no other more marked changes in social manners. None of the patients was observed to be demanding, rude, or impolite. On the contrary, the researcher was impressed with the effort that patients made to be cooperative and polite.

Secondly, only two Anglo-Australian and two Yugoslav patients showed signs of clinging behaviour. In three cases the patients were experiencing serious interpersonal problems within their families and tended to direct their clinging behaviour towards the staff and the researcher. In the fourth case the patient had a stable and supportive family situation and her behaviour was directed mainly towards the family. In all cases, patients appeared aware that they were being dependent on others, but also indicated that in order to cope with their current situation they needed someone on whom they could depend for emotional support and at times for specific interventions. Clinging behaviour did not appear to be directly related to the experience of pain, since there was a tendency for such behaviour to continue even after the patients started reporting little or no pain. In the main, these patients tended to be egocentric, anxious, and talkative, and they made attempts to keep others (whether family, staff or the researcher) in their presence for as long as possible. Unlike the patients who talked about their pain, these patients seldom focused on the topic of pain but tended to talk about their fears, concerns, and discomforts in more general terms. In the following example the patient had recognised her dependence, but also the beneficial results in her current situation. The comments were addressed to the researcher:

> I think I've really come to depend on you, but you are so easy to talk to and it really helps me. I was praying that you'd come again tonight...I didn't think I would be able to sleep unless I'd talked to you.
>
> (C.D., Anglo-Australian female)

In relation to the changes in personal appearance, the Anglo-Australian patients tended to be much more conscious of the need to appear "presentable". In other words, they tended to wash their hair, apply make-up, dress in their own clothes, etc. earlier than the Yugoslav patients. The patients who within one or two days of surgery washed and styled their hair, or had a shower or bath with little or no help, commented that the effort was tiring and tended to increase the pain. Nevertheless, the resulting boost to the individual's morale seemed to outweigh the discomfort and the effort required. For example:

> ...I got myself into the bath, and got myself out, which I was very proud of. I could see people around me on their third day and still having washes in bed.... Knowing that I had a nice clean bed, nice clean nightie, that was very important to me.
>
> (G.F., Anglo-Australian female)

The need to appear tidy and presentable was not restricted to women:

> I like everything spot on and in its place...I don't think much of these people that lie around all untidy (pointing to other patients in the room). I like my pillows straight, and the sheets folded back, and my hair brushed neat...
>
> (R.P., Anglo-Australian male)

On the other hand, there was a tendency among the Yugoslavs to delay activities such as hair washing or the use of cosmetics until they had regained some energy and their pain had subsided. For example, one 27 year old patient, on the third post-operative day, stated:

> I feel like an old woman. I guess I look like one too, but I can't be bothered with fashions....When I feel better I'll worry about how I look...
>
> (M.A., Yugoslav female)

The most marked differences in pain-related social behaviours between the Anglo-Australian and Yugoslav patients occurred in relation to changes in communication and social withdrawal. Patients who had been open and affable pre-operatively were observed to be quiet and subdued post-operatively. Most patients tended to speak quietly, and to speak less, using single phrases rather than long sentences, answering questions put to them but making few spontaneous comments. Such behaviour was more common among the Anglo-Australian patients and the differences were particularly marked on the second and third post-operative days. For example, on the first post-operative day, changes in communocation were observed in 12 of the 20 Anglo-Australian patients, but in only one of the 13 Yugoslav patients.

More Anglo-Australian patients also attempted to withdraw from social contact with others. There was a tendency for such patients to close their eyes as if to prevent or terminate a conversation. Patients who did not wish to be disturbed by others, particularly other patients, admitted to closing their eyes in order to be "left alone". Several Anglo-Australian patients expressed a wish, or made a formal request, for a single room in the early post-operative period. None of the Yugoslav patients made such requests. When recalling this early post-operative period, several Anglo-Australians later mentioned that they had instructed their families and friends not to visit during the first day or two. The question of expressed preferences with regard to the presence or absence of others while experiencing pain was an important one for this study and will be discussed later.

Suppression or Hiding of Pain

While social withdrawal may be seen as one form of hiding of pain, there were other behaviours which also suggested that patients were trying to suppress or hide their pain. As indicated in the discussion of vocal behaviour, up to one third of the patients showed signs of the suppression or hiding of pain. For some patients this meant that they tended to minimize the intensity of their pain when reporting it to others. Several Anglo-Australians, for example, were observed reporting their pain to the surgeon as only mild or "practically gone", while telling the researcher only a short time

later that the pain (even though improving) was still "quite bad", or even severe. Similar behaviour was observed in only one Yugoslav patient, a woman who (except for a few phrases) was unable to speak English. On the third post-operative day, during which she had reported moderate to severe wound pain and severe indigestion to the researcher, the following exchange (observed by the researcher) was described by the patient:

> My doctor came this morning. He looked at the wound and then asked me how I felt. I couldn't explain, so I just said 'all right', and he left happy.
>
> (K.R., Yugoslav female)

While the patient's intent was not to hide the pain the effect of her verbal statement was to do just that. The incident is cited here since it illustrates the communication barrier encountered by some patients and shows that hiding of pain can be quite unintentional.

Not all patients were selective in their hiding of pain. In most cases, such patients tended not to ask for pain relief or other forms of help and did not usually bring up the topic of pain. They also tried to be animated with their visitors and in some cases attempted to suppress motor behaviours such as wincing or tensing up with pain. In the following example comments were recorded on, and relate to, the second post-operative day:

> Researcher's notes: Circa 46 hours post-operatively. Patient has not had analgesia since yesterday morning (c.26 hours ago). Sitting in a chair; back very straight; gripping the armchair with both hands; face drawn and tense. Speaks haltingly and in short sentences but conversation revolves around outside topics (family, life in Sydney, etc.). Indicates no pain on the visual analogue scale and when asked about pain stated that she was 'only a little tender, that's all.' On further probing stated; 'Well, I wouldn't call it pain. It's more tender than anything else...it may make me double over if I try to get up, but I wouldn't call it pain.'
>
> (E.B., Anglo-Australian female)

Like the seven other Anglo-Australian patients who attempted to hide their pain on the second and third post-operative days, patient E.B.

recognised that such behaviour required determination and energy. Also, such patients saw the task of coping with pain and recovery as something that was almost entirely their own responsibility. Like the "old Americans" described by Zborowski (1969),[1] such patients were particularly aware of the ideal pattern of patient behaviour and tried very hard to conform to it. Emotional expressions such as crying or moaning were suppressed, even though they were observed in the early stages of recovery when the patient had severe pain. In particular, such patients voiced concerns about dependence on others, including staff, wishing to be "no trouble to other people." Mrs E.B. (speaking on the fifth post-operative day) typified her own attitudes, as well as those of other patients in this category, when she stated:

> You just make up your mind to get better, you make yourself get up and I am sure you can make your mind up to get better. I remember the first time I wanted to sit up, the drain[2] was digging in and really hurting, but I just said to myself, 'Come on, you've got to do it whether it hurts or not!' And I did. And besides, I have to get better as soon as possible...I don't want to be any bother to anyone.

Yugoslav patients, on the other hand, rarely tried to hide their pain, although one tended to minimise the intensity of her pain and three refused offers of analgesia from as early as the first post-operative day. As already mentioned, Yugoslav patients tended to talk openly about their pain, particularly with their families and the researcher.

In summary, it can be seen that attempts to hide pain were more commonly observed among the Anglo-Australian patients. While some patients were selective in their behaviour, minimising or attempting to hide their pain in front of doctors and visitors, others did so irrespective of the audience. A number of patients saw the suppression or hiding of pain as a means of coping with pain. Yugoslav patients, however, tended to admit to pain, and discussed it readily,

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1 See discussion in Chapter 2, page 33.

2 A "T-tube", inserted near the wound to drain bile following a cholecystectomy.

except in situations where language differences made verbal communication difficult.

OTHER SOURCES OF PAIN

The fifth question to which the study addresses itself is as follows:

What pain, other than that related to the surgical incision do patients experience and what are their responses to such pain?

The focus of this study is on pain which people experience after abdominal surgery, primarily pain related to the surgical incision. However, fairly early in the process of data collection it became clear that some patients also experience other types of pain. At times such pain can become more intense than the pain of surgery. Slightly over one half of all the patients (11 Anglo-Australians and seven Yugoslavs) reported pain other than that related to the wound, with 10 patients reporting such pain as worse than the wound or surgical pain. The distressing aspect of such pain, from the patient's point of view, was the lack of attention paid to it by the staff and (in many cases) the slowness of any treatment measures taken. There was considerable diversity in the types of pain reported.

A total of six patients (four Yugoslav and two Anglo-Australian) reported having headaches. In two cases patients commented spontaneously that the pain of the headache was more intense than the wound pain. While some of them also reported headaches in the later stages of recovery, all six patients experienced a headache on the second or third post-operative day, after they no longer received narcotics and in several cases before they were able, or allowed, to establish food intake. One patient, speaking on the third post-operative day, made the following comments:

> I had a terrible time with the tablets I was taking for my headache. I've had a terrible headache for a couple of days, that was bad. Last night...all night, I had a headache. I took so many Panadols, I don't know, whatever they gave me, but it didn't help. The injections were really good, but I couldn't have them...
>
> (K.B., Yugoslav female)

Several patients commented that a headache or backache was difficult to cope with since it was usually additional to other pain or discomfort. Thus they felt trapped by the pain, and found that their ability to cope was at times stretched to the limit.

A total of six patients (four Yugoslavs and two Anglo-Australians) also reported having backache. In three cases the intensity of pain was reported as higher than that related to the wound. The usual location of the pain was in the lumbar region, although two patients also reported shoulder pain, and one reported pain also radiating to the thighs. In all cases backache was present for several days, making it difficult for them to sleep at night or rest during the day. The meaning given to such pain varied between patients, with Yugoslavs attributing it to the effects of surgery and questioning whether the pain was an indicator of unsuccessful surgery. The two Anglo-Australian patients, on the other hand, blamed the pain on the "uncomfortable beds" and the inadequate attention to pressure areas such as back and heels by the nursing staff. As one patient stated:

> I feel they lack in doing your back and heels a lot. All the time I was in here I only had it done twice, and the bed gets very hot being rubber mattress....I didn't complain about it, but when I did have it done, it did make me feel a lot better... if they could attend to your sore parts.
>
> (A.R., Anglo-Australian female)

The most confusing experience of pain occurred in relation to reports of chest pain. Two Yugoslav and two Anglo-Australian patients reported pain in the chest area. Two of these patients (one Yugoslav and one Anglo-Australian) reported the pain to have been sharp and severe, and had associated it with the heart. In both cases a doctor was summoned to examine them. The patients later reported feeling foolish when told that they had nothing more than "gas" pains. As one of them explained:

> The only pain that I've had really, really bad, was one morning I woke up and I had a really bad wind pain in my shoulder and in my rib cage, and I thought I was having a heart attack. And when the doctor came over and told me that it was all out of proportion, that my mind was thinking of wild things, I sort of thought, 'Well, this must be my imagination'...
>
> (C.D., Anglo-Australian female)

None of the four patients who reported chest pain linked this with the direct effects of surgery, but rather, feared that it might signify some serious complication. The reports of chest pain in the remaining two cases were not referred to the medical staff but were diagnosed by the nursing staff as also due to the effects of "wind". Such pain was of short duration and the patients reported feeling "much better" once the cause had been explained to them.

The most distressing pain was reported by two patients (one Anglo-Australian and one Yugoslav) who experienced what they described as "burning pain" in the epigastric area. Both were adamant that the epigastric pain was more severe than the wound pain, and it also proved to be more persistent. The Anglo-Australian, who was otherwise determined to be a good patient, was particularly distressed by his failure to communicate the severity of this pain to the staff and hence his failure to obtain help in dealing with it. The lengthy quotation which follows reveals the extent of the patient's distress as well as the associated frustration:

> ...as soon as I woke up under the anaesthetic in the recovery room, me mind came to life, and 'well, what the hell's wrong with me stomach?'...but this is it, I'd never experienced that before and I felt like, as if I had an ulcer there....That was the one, that was the major bother, the cut, the wound never bothered me at all....It was like a stick being forced up the gullet, scraping like a splintery stick, like a broken end of a stick, the splinters being forced up into the gullet...it's not like a normal pain, it's a horrible pain sort of thing, and therefore your well being is directly proportional to it. You don't want to talk to anybody, you can't read....It mentally upset me and it made me cranky....I just staggered along at lower level all the time and going downhill...because of this business where I couldn't relax, I couldn't lie down, and I couldn't have anything, any pain killers to relieve it, they wouldn't allow anything in the bowel....The point was, as I've said to other people, how can you sort of give the hospital staff a mental picture of what you are going through, they know you've had an operation, you should be fixed up...but you can't....I had to keep niggling at the staff to find out if there was anything I could have, because...the message was 'how am I going to get it into their mind when they want me in a perfectly healthy state, all good, that I am in

> a miserable state, how am I going to get that message over to them?
>
> (R.P., Anglo-Australian male)

In addition to other types of pain, one patient reported painful haemorrhoids and another what she described as "unbearable arthralgia" - aches and pains in the joints, which she attributed to the allergic response to drugs. Both of these patients were Anglo-Australians.

The largest number of patients who reported pain other than that related to the surgical incision (six Anglo-Australians and one Yugoslav) made reports of pain located around the site of intravenous infusions. In all cases the patients had intravenous infusions for at least 48 hours, and in all cases there was seepage of the fluid into the interstitial space. In at least two cases the fluid being administered contained potassium chloride (which unless given into a vein produces a severe, stinging pain). In all but two cases there was a delay of up to two hours from the time when the pain was reported to the time when the intravenous needle or catheter was removed. In at least one case involving potassium chloride, where the patient reported that his arm was painful, the infusion was continued with the explanation that "a doctor would need to come to see it."

Of the seven patients who reported pain in the area of the intravenous site, two stated that this pain was more intense than the wound pain. What made this pain more difficult to tolerate was the fact that most patients either did not expect to have an intravenous infusion, or did not expect to have pain as a result of it. It was perceived by the patients not only as pain quite separate from surgery, but also as pain inflicted on them. As one patient explained:

> I don't know about all these attempts to get this drip in my arm...actually this happened before the operation, so that was probably all right, but if that had happened after I probably would have been more cheesed off about it, I think. After the fifth attempt it was getting a bit painful, you know.
>
> (A.A., Anglo-Australian female)

Another patient described her experience as follows:

> ...when I was coming round, I didn't realise I had a drip on, and I was madly throwing my arms round the air, and my husband was saying 'Put your arms down, put your arms down.' It wasn't hurting me then, because I didn't realise I had it, you know. I should have had it out Sunday afternoon, but they'd taken it out because I think I had a swelling there, starting to swell up, that was about the worst pain I had really. I didn't have my hand on a splint, and as I bent my hand the needle was so long it would kind of intrude into the vein and really hurt me...
>
> (A.R., Anglo-Australian female)

Other sources of inflicted pain (i.e. pain which was not seen as the result of the operation or its consequences, but due to specific actions of others), were intramuscular injections, particularly of antibiotics, insertion and removal of urinary catheters, removal of drains, and in some cases the removal of sutures. It is difficult to know how much of the pain which patients experience post-operatively could be prevented or alleviated. Both Yugoslav and Anglo-Australian patients tended to accept that some post-operative pain was inevitable, and that even inflicted pain was ultimately for their benefit. The acceptance of pain, however, did not stop the majority of patients from expressing their pain, sometimes in very vivid terms:

> ...first couple of days after the operation was the worst, I think, because they still would not let me rest. Like, they'd take me up to x-rays, and every time I'd get like that, they'd lift me out of the bed onto those trolleys and they would roll you there, and they'd run over bumps and holes and a big jolt would go right through you, and then they (say), 'Righto now, get over onto this table' and oh,...by the time they got you back here, I just felt like I'd been through another operation again. You just lay on the bed completely exhausted. But they had to do it, and that's the hard part about it.
>
> (D.P., Anglo-Australian male)

In summary, it can be seen that pain related to the surgical incision is not the only type of pain experienced in the post-operative period. Just over one half of all the patients reported other types of pain, with a smaller number indicating that such pain

was more severe than the pain of surgery. There were no differences between the numbers of Anglo-Australian and Yugoslav patients who reported such pain. While the response to such pain was similar to the way patients responded to pain generally, overall they tended to comment that they had difficulties in communicating the severity of their pain to the staff, and/or obtaining prompt and adequate relief.

SUMMARY

In examining the experience of pain in surgical patients (by taking a close look at not only the observable responses but also the meanings attached to the experience) it becomes evident that most patients in this study suffered considerable pain, particularly in the early stages of their recovery. These findings are in line with earlier studies and observations made by health professionals working in the area and discussed earlier, in the review of the literature (Fagerhaugh and Strauss, 1977; Hannington-Kiff, 1974; Watts, 1975).

The trajectory, or the observed course of the development of pain recorded in this study resembles the characteristics of acute pain described by writers such as Swerdlow (1972) (see discussion on page 16). Such descriptions tend to stress changes in the intensity of pain. On the other hand, this study also points to a change in the quality of pain occurring between one and six days after surgery. This finding points to a considerable variation between individuals in terms of the time when change in the quality and intensity of pain is experienced, as well as the significance of this change for the individual's perception of, and attitudes to, his or her recovery. It was the subjective experience of decreasing and changing pain, and increasing feelings of well being, which served as indicators to the patients in this study that they had indeed "turned the corner" and were making satisfactory progress towards full recovery.

In relation to the pain related behaviours observed in the two groups during the study, two threads can be identified in the material presented thus far. First, there is considerable similarity between Anglo-Australians and Yugoslavs in terms of their motor and vocal responses, and their reports of the intensity and duration of

pain. It is important that such similarities be recognised, especially as most of the clinical studies reviewed in Chapter 2 have tended to report either that no differences were identified between cultural groups (Winsberg and Greenlick, 1967), or have focused predominantly on the differences able to be identified (Zborowski, 1969).

Second, the study has revealed important differences between the Anglo-Australians and Yugoslavs. The Anglo-Australians (particularly women) more readily complained about their pain, and were more ready to request help, particularly in the form of medication. In doing so they used a rich vocabulary of terms which came predominantly from the sensory category. Such behaviour resembles that of "old Americans", described by Zborowski (1969), whose aim was to communicate their experience to the staff in order to obtain relief from pain and be able to continue behaving as "good" and cooperative patients. By using fewer and predominantly evaluative terms, and by their reliance on the term "pain", Yugoslav patients were probably less able to facilitate staff's diagnosis of the source of their pain and its significance. The desire of Yugoslavs to talk about pain, without necessarily wishing to take analgesic drugs, also reflects attitudes towards pain which are concerned more with the need to cope with pain (by sharing the experience with others) than with the need to be regarded as ideal patients.

These findings illustrate the value of the qualitative approach in nursing research since they point to issues of considerable significance for clinical practice. Specific conclusions, as well as implications of this study, are presented in the final chapter.

Chapter 6

SURGICAL PATIENTS AND THE RELIEF OF PAIN

> The injections were the best, then when the pain eased, the tablets....After 10 or 15 minutes pain stops and maybe for two hours you feel no pain, then it starts again...
>
> (O.F., Yugoslav female)

The relief of pain in surgical patients may, on the surface, appear to be a relatively simple task - in reality it can become a complicated process. Pain relief has to be balanced against other tasks such as treatment or prevention of complications. It is also influenced by the adequacy of pain assessment, the appropriateness of prescribed interventions, and patient cooperativeness in reporting pain and providing clear indications of its severity. Whatever the problems, however, the expectation that nurses will provide comfort and relief of pain and suffering is implicit in both past[1] and present[2] definitions of nursing. Shared by patients, the expectation of comfort and relief of discomfort becomes an essential component of nursing practice (White, 1972). For surgical patients the general expectation that they will have a certain amount of pain, and that analgesic drugs will play a major role in the relief of such pain, has been discussed in the review of literature (see page 16).

In this chapter, four main issues are discussed. First, the use and administration of analgesic drugs is examined, particularly in relation to patient attitudes towards such drugs and the frequency with which they are administered. Second, use of analgesic drugs is

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1 Florence Nightingale, in a book first published in 1859, for example, suggests that it is the duty of the nurse to supply whatever help is needed to a person suffering from disease (see Nightingale, F. Notes on Nursing: What it is and what it is not, London, Duckworth, 1970); Ida J. Orlando stresses the assurance of physical and mental comfort as one of the principal tasks of nursing (see Orlando, I.J. The Dynamic Nurse-Patient Relationship, New York, F.P. Putnam's Sons, 1961).

2 Joyce Travelbee states that the purpose of nursing is to help individuals or groups "prevent or cope with the experience of illness or suffering..." (see Travelbee, J., Interpersonal Aspects of Nursing, 2nd Ed., Philadelphia, F.A. Davis, 1971, 16).

discussed from the point of view of their perceived effect and adequacy. Third, issues surrounding other pain relieving measures and activities are discussed, with special reference (in the final section) to the question of company for patients in pain.

USE AND ADMINISTRATION OF DRUGS

The sixth question to which the study addresses itself is as follows:

What attitudes do patients have towards pain-relieving drugs and the frequency with which these are administered?

Attitudes towards the taking of pain-relieving medication are affected by the knowledge people have about such medication, their beliefs and attitudes about taking of drugs generally, and their beliefs and attitudes about pain. The views expressed by patients in the study varied considerably. At one extreme there was a patient who stated that she tried to ignore any aches or pains she developed since she "did not believe in taking tablets or powders" for any ailment, while another patient stated that her life depended on drugs prescribed by her doctor, "tablets were the only things which kept her going." Most patients, however, did not express any clear ideas in relation to pain-relieving drugs pre-operatively, except to express a hope that if they did have post-operative pain which became severe then "someone would do something about it."

As a group, the Anglo-Australian patients had greater knowledge of the fact that analgesic drugs were available to them post-operatively and that they could ask for such drugs. Two Anglo-Australians with a medical background were able to make particularly good use of such knowledge in their interactions with hospital staff. Both of these patients were able to decide for themselves the benefits and drawbacks of having regular injections of narcotics, for example, and both chose to have the drugs as frequently as was necessary to control the pain. None of the other patients, however, had such knowledge. Even the Anglo-Australian patients who were more aware of the availability of drugs, nevertheless often did not know the name of the narcotic they were given or the frequency with which they could have it. As a result, it was not until the patient experienced severe pain and asked for pain relief that (s)he learned that such medication

was only available at certain, strictly-adhered-to intervals (see G.F. incident, page 137).

Whether as the result of such direct experiences, or previous socialization, most patients tended to see injections of narcotics as something very special, very effective, but also in some way dangerous. The surprising aspect of this situation, at least to the researcher, was the readiness with which they accepted a statement that, even though in pain, they would have to wait for anything from 10 minutes to two hours before they could be given another injection. None of the patients was observed, nor did they report, questioning why this was the case or what, if anything, would happen if they were administered such drugs at more frequent intervals. While it is not possible to state how many patients thought about this problem at the time, at least two patients later raised the topic without prompting (but only with the researcher), indicating that they were aware of the unsatisfactory nature of the situation. The first of these two patients said:

> I can remember thinking at the time...that I needed something right now, and then when they said they couldn't give it to me for another ten minutes because I'd had one two hours before, I remember thinking 'Why on earth would you be giving me a pain killer when I am unconscious, two hours before, that's absurd.' But I was in no state to go through an argument like this, I could hardly talk....But I can really remember back thinking...'Fancy giving me an injection when I am unconscious and not being able to give it to me now'...fortunately, I didn't say any of those things to anybody. I was just thinking them all the time.
>
> (A.A., Anglo-Australian female)

The second patient (for whom this was the first experience of surgery) suggested that perhaps there was a need for strict control of the frequency with which narcotics were administered, since without such control patients could take advantage of the situation. However, she acknowledged that in her own case she experienced more pain as the result of the staff's strict adherence to the prescribed frequency of administration of analgesic drugs.

> I don't think that this four hourly business is strictly right. I know it's a great responsibility for the sisters because people could play on that all the time, so I suppose there is nothing really they can do about the injections, you know, human beings being as they are, but I thought it was a little inflexible.
>
> (G.F., Anglo-Australian female)

In most cases, patients could see no alternative but to accept the situation as given. While the Yugoslavs felt that they simply had to suffer the pain until they were given another dose of analgesia, some Anglo-Australians resorted to the use of other coping devices.

> I used to psyche myself out of it when I knew that I wanted the needle and they said, 'Sorry Mrs C., you can't have it for another hour.' I said to myself, 'just lie there and relax, it will come, it will come, don't think about it, just try and wait...just pace yourself, just think of other things.'
>
> (N.C., Anglo-Australian female)

The Yugoslavs not only accepted their lot without question but perceived the administration of such drugs as being totally in the control of medical and nursing staff. Several patients, for example, made a statement similar to the following:

> They know how you are (feeling)...what you need. I can't say that I needed more (pain-relieving drugs) when I haven't studied about it. They know about it, it's their work. If they don't know, they should not get paid.
>
> (N.T., Yugoslav female)

During the initial post-operative period none of the patients refused pain-relieving drugs, even though some were reluctant to ask for such medication and others did not ask at all. The reasons that patients gave for not asking for pain-relieving drugs were related to their attitudes to pain and to what they considered to be appropriate responses in the situation, rather than to any concerns with the toxic or other side effects of drugs. None of them, for example, expressed a concern about the addictive properties of drugs. Rather, the response in the immediate situation was to comment on how effective the drugs were in controlling their pain and allowing them to relax and sleep. The exception to this were three Anglo-Australian

female patients who had severe nausea and vomiting in the first 24 hours after surgery. In all three cases, they expressed negative attitudes towards pain-relieving medication since they implicated the injections of narcotics as the cause of their nausea and vomiting. For these patients, rather than being sources of pain relief, narcotics were perceived as sources of additional suffering.

Attitudes towards the milder analgesics were somewhat different. Most patients, both Anglo-Australian and Yugoslav, agreed that they were less potent, took longer to act, and were less effective than the injections of narcotics. Nevertheless, the majority of patients stated that they appreciated being able to have some form of medication until their pain had decreased to a degree which they felt was within their level of tolerance. The Anglo-Australians and Yugoslavs showed no appreciable differences in relation to the timing of their last dose of analgesic medication. For example, 16 of the 20 Anglo-Australian and 11 of the 13 Yugoslav patients had their last dose of analgesic medication on or before the seventh post-operative day.

However, while there were no appreciable differences in either the amount or the duration of analgesic drug administration between the two groups, there were some differences in attitudes. The Anglo-Australian patients commented that, in the later stages of recovery, they took mild analgesics because they were offered; because of other aches and pains (e.g. headaches); or as a preventative measure, in case they developed pain later. One such patient gave the following explanation for taking "pain tablets", even though he doubted their effectiveness:

> ...I don't know what they are for, but they don't do anything....I take them for the matter of saying 'Well, I might just as well help the hospital staff by saying that I've medicated myself....' I said 'seeing that I've got a couple, I might as well take them, and if there is any pain going to erupt in the night, or any soreness, I am fortified.' That's what it is, like preventative rather than curative sort of thing, that's the reason for it.
>
> (R.P., Anglo-Australian male)

Those Anglo-Australian patients no longer taking mild analgesics (in the last three days of their hospitalization) tended to state that

they no longer had pain and therefore were no longer in need of pain-relieving medication. Yugoslav patients, on the other hand, tended to state that they took analgesic medication because they had pain of sufficient severity to require such medication. The ones who were no longer taking analgesic drugs, either stated that they no longer had any pain, or that the pain was bearable even though still "painful". The patients therefore commented that they chose to suffer the pain rather than have it completely eliminated by drugs. The following comments were typical of the Yugoslavs, even though some felt that they were not totally successful in "standing up to the pain":

> I could have had more (analgesic drugs), but I like to put up with it. I don't like taking a lot of pain killing or sleeping tablets. I like to be able to bear it...I think it is better for the pain to go out of you of its own accord, rather than to have a lot of injections and tablets...it depends, if you can stand the pain, there is no need to take anything, but if you can't stand it, then you should ask.
>
> (Z.C., Yugoslav female)

In summary, there was a tendency among both Yugoslav and Anglo-Australian patients to regard narcotic drugs as very effective, but also in some way dangerous. In addition, Yugoslav patients showed a greater tendency for viewing the frequency of administration of such drugs as being the prerogative of the nursing and medical staff without the need for consultation with the patient. None of the patients expressed any concerns about addiction or other side effects of the drugs. Most saw mild analgesics as less potent and acting more slowly, but while the Anglo-Australian patients were prepared to take such medication even when not in pain, the Yugoslav patients, at times, preferred not to take the medication offered. The need to suffer some degree of pain and get rid of it without the aid of drugs, mentioned by several Yugoslav patients, suggests that these patients regarded suffering as having some intrinsic value which would be altered by the use of drugs.

PERCEIVED EFFECT AND ADEQUACY OF ANALGESIA

The seventh question to which the study addresses itself is as follows:

What is the perceived effect of analgesia and the overall estimation of its adequacy by the individual patient?

Analgesic drugs are administered during the post-operative period with the general intent of relieving pain. The effects of such drugs, however, are not uniform for all patients, either in terms of the degree of pain relief obtained, or the side effects of the drugs.

In relation to narcotics administered during the early post-operative period, patients described effects ranging from the total elimination of pain to situations in which the pain persisted but its intensity had been muted. Regardless of whether pain was eliminated or only reduced in intensity, the majority stated that the most beneficial effect of the narcotics was to induce sleep or to reduce the pain sufficiently to allow the patient to fall asleep. The following quotations illustrate these points:

> The injections were the best. Then when the pain was easier, the tablets...after 10 or 15 minutes the pain stops, and maybe for two hours you feel no pain, then it starts again.
>
> (O.F., Yugoslav female)

> ...the injections they were giving me, I've never bothered to find out what they were, but I think whatever they were giving me, eased it. It deadened it, it numbed my body, it gave me a numb sensation...a lost kind of feeling you know, and I've got a numb feeling all over me. And all I wanted to do just then was to go to sleep. That eased me.
>
> (A.R., Anglo-Australian female)

> Well, they (injections) make you very sleepy, so while you sleep you don't feel anything, until the three hours and then you wake up, and you are just dying to, waiting for that next needle, so you can just go back to sleep and just wake up and say 'it's all over'.
>
> (N.C., Anglo-Australian female)

> ...well, I finally got the injection...which didn't do much good at all, it just took the peak off...and with that I got to sleep, and the next day I was a hundred percent better...
>
> (R.P., Anglo-Australian male)

With the exception of the three patients who experienced severe nausea and vomiting (which they attributed to the effects of narcotics) most patients perceived the injections they were given as acting rapidly and providing the needed relief from pain. However, most patients also commented that the effects did not last more than two to three hours so that there was always the interval between the dosages when the pain would not only be felt but it would become severe. The comments of patients during the first two post-operative days would suggest that they experienced inadequate relief of pain in terms of the frequency with which analgesic drugs were administered (see patient N.C.'s comments, page 158 and page 161). Comments such as the following were not uncommon, either among the Yugoslavs or the Anglo-Australians:

> The injections only lasted two hours, while the other two hours I suffered with the pain. They said they were not allowed to give injections if they give tablets, that they are not allowed to give injections. In any case, they say that tablets are weaker than injections...and so for two hours I had to suffer.
>
> (I.L., Yugoslav female)

There were no appreciable differences between the Anglo-Australians and the Yugoslavs in relation to the number of patients who made such comments. Their subjective evaluation of their experience is supported by other evidence. For example, during the first post-operative day the average interval between doses of narcotics was 8.7 hours. There were no marked differences between the Anglo-Australian and the Yugoslav women who received a dose on the average every 7.8 and 7.6 hours, respectively. The average interval for the Anglo-Australian males, on the other hand, was 10.6 hours. At the same time, seven patients were also given milder analgesics, even though six of them had had only three doses, or less, of narcotics, and five of them reported their pain for that day to have been severe or very severe. Thus while 30 of the 33 patients reported that injections of narcotics had positive pain relieving and sedative effects on them, the frequency of drug administration for most patients was such that their pain levels were able to rise to the point where only three of the 20 Anglo-Australians and one of the 13 Yugoslavs did not report their pain

as severe (see Tables 4.13 and 4.14).

In relation to the mild analgesics, most patients stated that they provided an adequate relief from pain after the pain had in fact subsided below the levels subjectively defined as severe. The problems were experienced during the second or third post-operative day, when patients were told that they could no longer be given narcotics for the pain. The following extract (from a final interview) is typical of the experiences of most patients, (Yugoslav and Anglo-Australian) in that they were told about the "last injection":

> I don't know if they cut off the Pethidine um ...(too soon), I was told 'this is your last injection', but then somehow I didn't need it after that. I woke up one night with great pain, I needed the injection and they said, 'this is your last injection'. I don't know if it was pain or psychological, or what, but from then on I was quite happy on the ... tablets they gave me.
>
> (G.F., Anglo-Australian female, who received the last of 11 doses of Pethidine on the 3rd post-operative day)

Another patient who received the last of six doses of Omnopon on the second post-operative day described his experience as follows:

> For the first two days I had injections, I don't know how many I had, I wouldn't know. But I know the sister said, with the last one she gave me, she said, 'Now, you can't keep having them', so I didn't ask for any more...
>
> (H.T., Anglo-Australian male)

While the Yugoslav patients in particular accepted the decision to have the narcotics discontinued without protest (as did most of the Anglo-Australians), a small number of patients did attempt to change the decision and succeeded. For example:

> Patient: Thursday was the first night they took me off having the injections and I was having Panadol, and that was totally ridiculous.
>
> Researcher: It wasn't enough for you, or...?
>
> Patient: No, it wasn't enough. That was the night I asked for an

> injection...but they did
> give me one...two nights they
> gave these injections for
> pain, you know, and on Thursday
> you are expected to 'whammo!'
> and put up with the whole lot,
> you know. I think it was too
> early.
>
> (P.G., Anglo-Australian female,
> who received the last of nine
> doses of Pethidine on the 2nd post-
> operative day)

The mind analgesics therefore were both acceptable to the patients and were perceived as effective, but only when the intensity of pain was sufficiently low from the patient's point of view. The perceived effectiveness of mild analgesics, like the narcotics, varied from total elimination of pain to a limited, but nevertheless perceptible reduction of pain. There were no appreciable differences between the Yugoslav and Anglo-Australian patients in relation to this point.

In the final interview, prior to discharge from the hospital, patients were asked to estimate the adequacy of the pain relieving medication they had received during the post-operative period. The discussion on the preceding pages would tend to suggest that the majority of the patients would have judged the amount of analgesia which they received as inadequate. In fact, as shown in Figs 6.1, 6.2 and 6.3, less than one fifth (four Anglo-Australians and two Yugoslavs) stated that the analgesia they received was not adequate. Approximately one half of all the patients stated that the amount of analgesia they received was adequate while another seven patients stated that they were not sure. The comparison of daily records made during participant observation (with comments about the patient's verbal and non verbal behaviours) and the statements made by patients in the final interview, would lend strong support to the notion (suggested by Copp, 1974) that part of the experience of pain is to forget its intensity and its impact (see the review of literature, Chapter 2 page 24). When evaluating their pain retrospectively, patients in this study have tended to minimise to a certain extent the amount of pain they experienced. It is logical, therefore, that in the evaluation of analgesic medication there should be a like

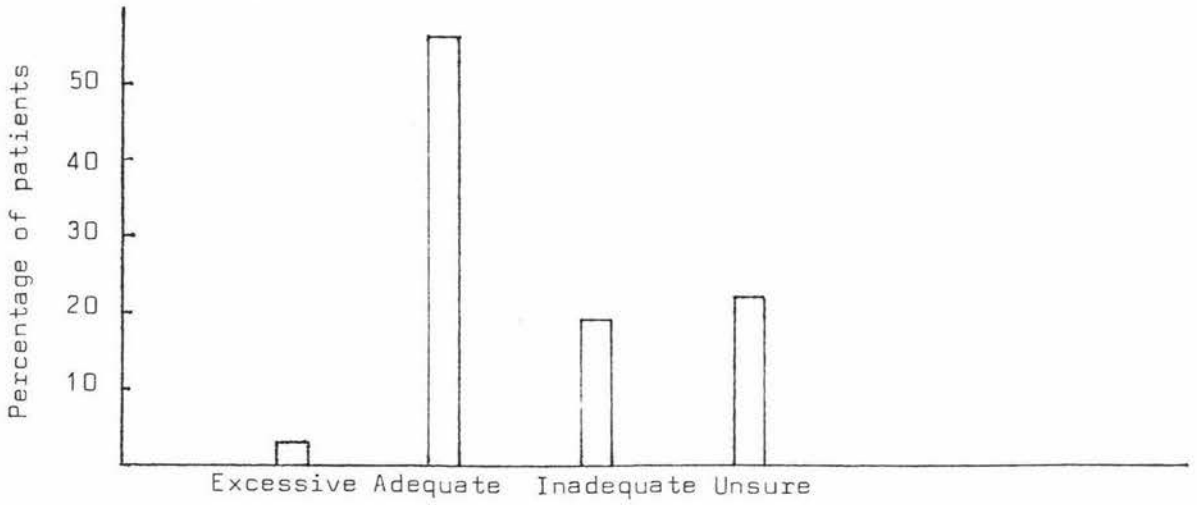

Fig 6.1 Percentage distribution of patients according to the retrospective evaluation of the adequacy of analgesia received (total group)

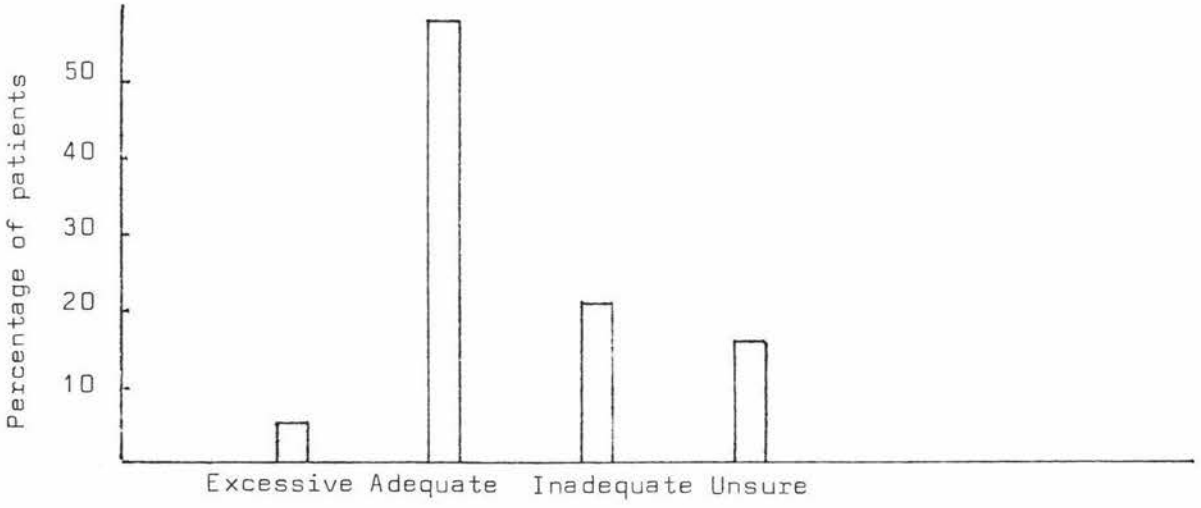

Fig 6.2 Percentage distribution of Anglo-Australian patients according to the retrospective evaluation of the adequacy of analgesia received

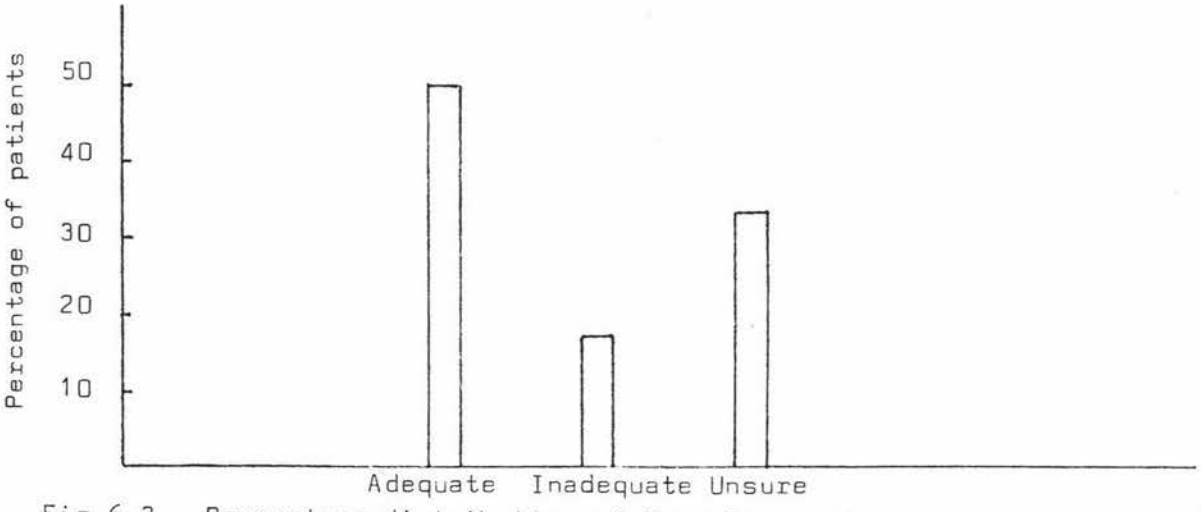

Fig 6.3 Percentage distribution of Yugoslav patients according to the retrospective evaluation of the adequacy of analgesia received

tendency to view the analgesia received as adequate. An additional factor may have been the view of patients who regarded decisions related to the administration of drugs as the prerogative of hospital staff, a prerogative which they did not question even in retrospect.

In summary, patients reported that the narcotics they received had the effect of reducing the pain or eliminating it completely. In addition, most also reported the sedative effects of narcotics. Mild analgesics, while not inducing sleep, were nevertheless perceived as effectively reducing or eliminating pain, but only after the level of pain had subsided and was no longer severe. While most patients reacted to the change from narcotic analgesics to mild analgesics with acquiescence, some did express feelings which suggested that mild analgesics were, at that stage, inadequate in providing relief from pain. The frequency of administration of analgesic drugs in the early post-operative period led a number of patients to suggest that they experienced considerable pain during the intervals between doses of analgesia. When asked in the final interview to evaluate the adequacy of the analgesia they received, only a small number of patients stated that the amount received was inadequate, thus suggesting that the patients had engaged in a process of denial and forgetting not only of the pain, but also the drugs related to its treatment.

OTHER PAIN-RELIEVING MEASURES AND ACTIVITIES

The eighth question to which the study addresses itself is as follows:

Which measures or activities, other than drugs, do patients perceive as helpful in the relief of pain?

In the discussion of pain-related behaviours it was pointed out that during the first two to three post-operative days patients tended to move very little, to lie or sit in a rigid position and in some cases avoided activities such as post-operative exercises. Since any strain on the abdominal muscles tended to produce or increase pain, patients were understandably reluctant to do anything which would strain these muscles. Most patients, however, commented that

during the early stages of recovery there was little or nothing one could do to relieve pain, except by means of drugs. For example:

> Researcher: Apart from the injections, is there anything else that helps to ease the pain for you?
>
> Patient: Well, now I can. Now, if I lie flat at night I am still uncomfortable, I've still got to be in pain, but if I lie on my side and I manage to get my legs up...but that's how I normally sleep...that helps. But in the beginning, I couldn't, no, I just couldn't get there. I probably could when I was having the injections, but it didn't matter because I wasn't in pain....No, (there was) nothing, absolutely nothing! It's there, it's...you can't drive it away, you are stuck with it.
>
> (P.G., Anglo-Australian female)

During the final interview, prior to their discharge from hospital, patients were asked to comment on the measures which they found helpful in relieving their pain. Slightly more than 25 percent stated that throughout their stay in hospital there was nothing other than the analgesic drugs that was helpful. The difference between the two groups was appreciable, with three Anglo-Australian patients and six Yugoslavs stating that there were no particular measures or activities which relieved their pain (see Figs 6.4, 6.5 and 6.6). Typical comments suggested that while patients appreciated the care and interest provided by the staff, ultimately the individual patient was the one who had the pain and who had to suffer it. Several Yugoslav patients also suggested that, irrespective of what was done, the pain would resolve itself in its own time. For example:

> Researcher: What things helped to ease your pain?
>
> Patient: Well, almost nothing...almost nothing. They gave me medicines, four, five kinds of medicines, for the wind, and tablets. None of it made me feel any better, until (it came) of its own accord. I think it came of its own accord.
>
> (I.L., Yugoslav female)

While it is clear that some patients, at least, did not perceive any measures or activities as affecting their experience of pain, it is possible that this may have been because no one had suggested that measures such as special positioning, relaxation, taking short walks, or having a shower, could have a positive influence on the reduction of pain. When such measures were suggested to patients they tended to use them and to perceive them as helpful.

Researcher: Was there anything else that helped to relieve the pain for you?

Patient: Hmm, well, I took your suggestion[1] of using a pillow at night when I wanted to lie on my side, and that did help a little. I sort of supported the stitches...that was really good because it meant that I could sleep more comfortably, because I could turn then, it was quite nice actually, it felt like a little comforter, I holding a pillow to my stomach, it was quite good actually...but there wasn't anything else that I really tried.

(A.A., Anglo-Australian female)

In some cases, after self-initiated trial and error, patients also discovered for themselves ways of relieving the pain:

Patient: If I rolled over on my side and put a pillow in between my legs, and sort of rested my tummy on that to go to sleep, it was really terrific.

Researcher: When did you discover that?

Patient: On Sunday (4th post-operative day).

Researcher: Did you find it out for yourself, or did someone else show you how to...?

Patient: I had tried it...I tried to do it myself, and then sister came and she helped me...it was really good.

(A.T., Anglo-Australian female)

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[1] While the researcher participated in some aspects of basic nursing care, specific interventions of this type were usually avoided, since it was considered that management of pain should remain the responsibility of hospital staff. As in the case cited here, however, the exigencies of the situation at times compelled the researcher to intervene with more direct action.

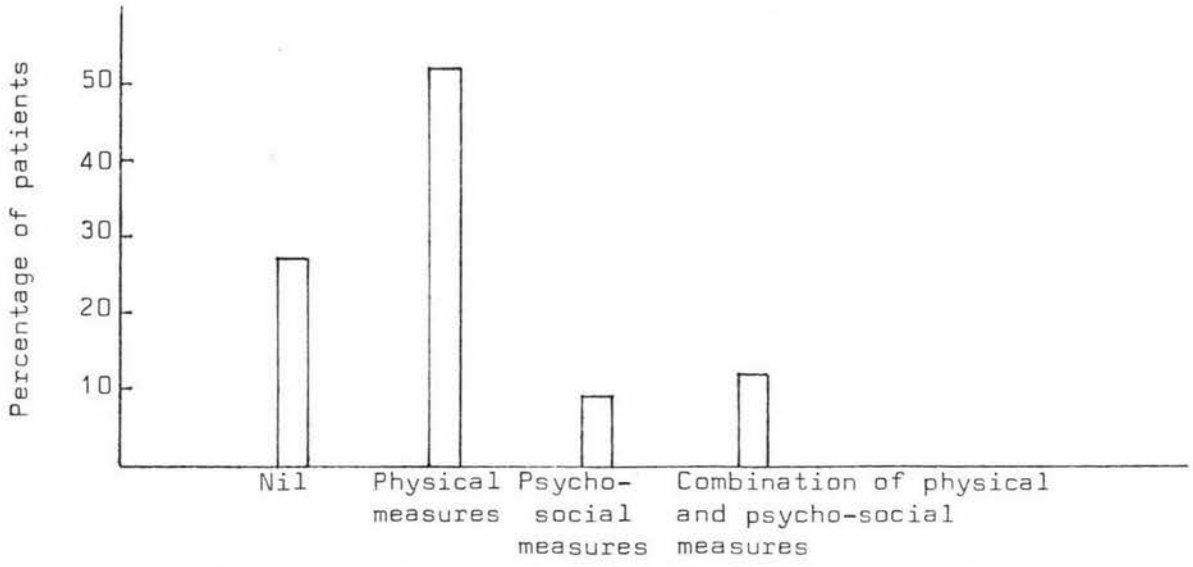

Fig 6.4 Percentage distribution of patients according to non-medication measures reported as helpful in relieving pain (total group)

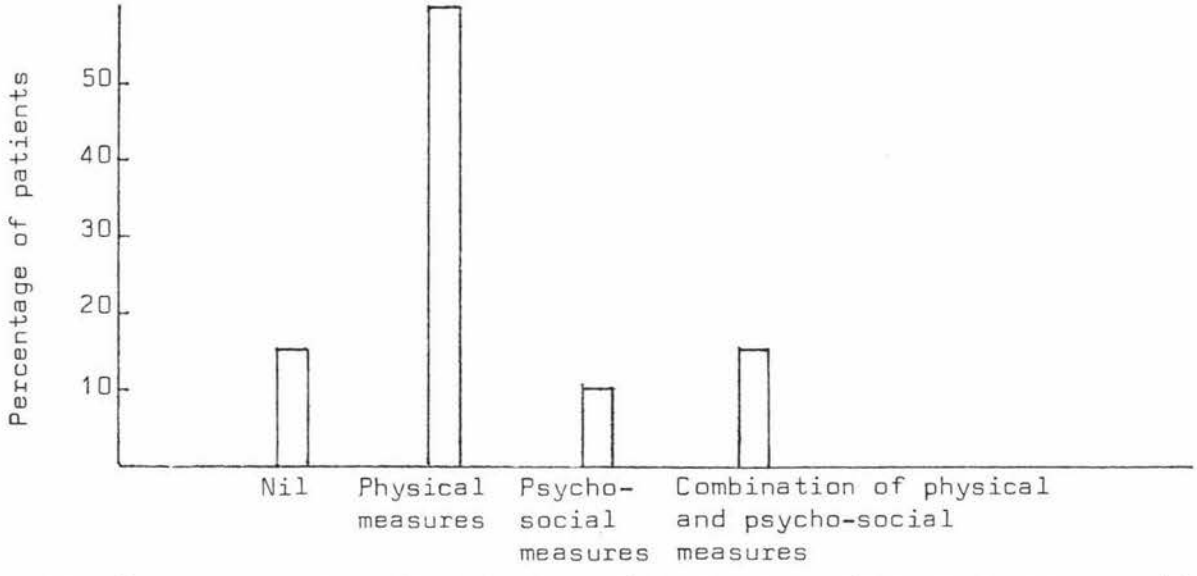

Fig 6.5 Percentage distribution of Anglo-Australian patients according to non-medication measures reported as helpful in relieving pain

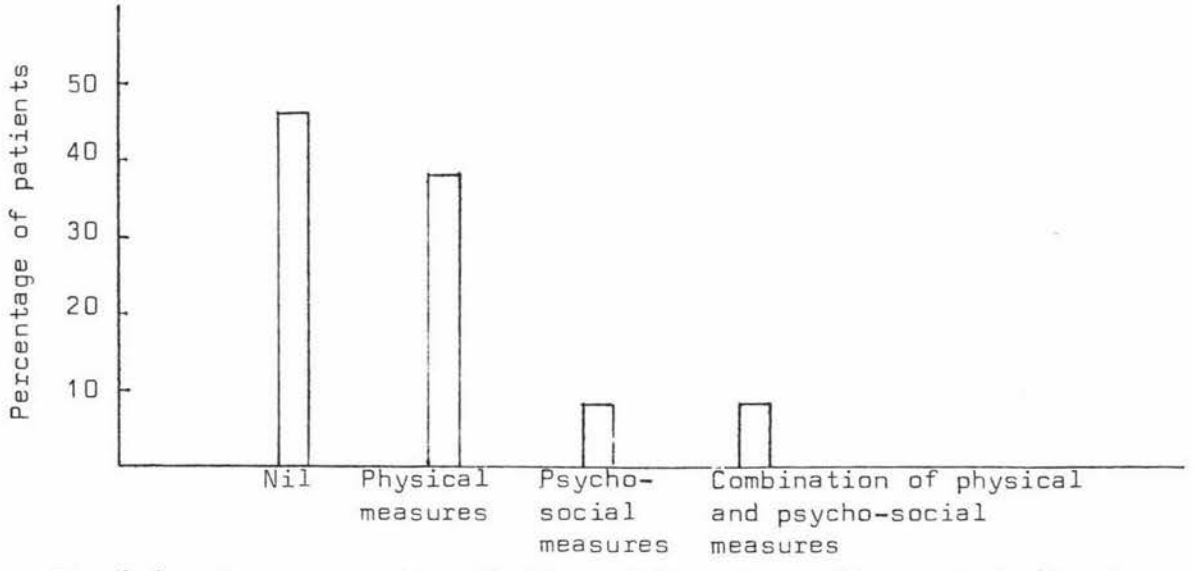

Fig 6.6 Percentage distribution of Yugoslav patients according to non-medication measures reported as helpful in relieving pain

Physical measures such as specific body positions, walking, or back massage, were identified as helpful in relieving the pain by 17 of the 33 patients (12 Anglo-Australians and five Yugoslavs). While the Yugoslavs and the Anglo-Australians made similar comments, there were some underlying differences. Both groups suggested, for example, that walking was beneficial, but the participant-observation notes indicate that Anglo-Australian patients tended to start ambulating earlier and would force themselves to do so even when in pain. Sheer determination would, however, tend to produce the desired results. For example:

> Patient: If I got any pain in the bed, I'd get out on the floor and walk around and then it would go. That's why I walked round and round the bed all the time.
>
> Researcher: Yes, you did too...
>
> Patient: Yes, yes, every time I saw that I, I felt a little bit of pain, then out I'd get and I would walk around, and that relieved it all. Exercise, I think.
>
> (E.B., Anglo-Australian female)

Yugoslav patients, on the other hand, tended to suggest that everything took time (the pain to ease, the energy to return, etc.) so that there was the initial period when rest was appropriate, and only later was it desirable to commence ambulating. There was no suggestion that ambulation should be delayed for as long as possible, but rather that the patient's subjective feelings of capacity to commence ambulating should be the deciding factor. Another factor, mentioned by several patients, was the need for moderation and gradual increase of activities. The following comments illustrate the views expressed:

> ...the first day I took a stroll, it was a bit long, so it hurt. But because I went for a stroll, the next day I was feeling better. The next day I felt much stronger and I didn't need injections, just tablets. It's very important to start walking as soon as possible.
>
> (D.Y., Yugoslav female)

> It's important not to be lying down all the time, but getting up, taking a stroll, sitting down....It isn't good to be just lying down. When you take a stroll, sit down for a while, then go back to bed, but not for too long, then the pain is easier.
>
> (O.F., Yugoslav female)

Other physical measures perceived as relieving pain included applying pressure and support to the wound area (one Anglo-Australian patient insisted on having an elastic bandage wound around ber abdomen), having a shower, and sitting up in a soft armchair. Patients also reported that the removal of tubes, catheters, and later sutures, also tended to relieve the pain.

Only a small number (one Yugoslav and two Anglo-Australians) mentioned psychosocial measures which they found helpful in relieving pain. One of the Anglo-Australians mentioned a form of auto-suggestion which she used in order to cope with pain between the doses of analgesics (see patient N.C.'s comments, page 158). A similar strategy of self-initiated distraction was used by the second Anglo-Australian who, because of severe vomiting, was not given narcotics after the first post-operative day:

> Researcher: While we are still on the topic of pain, what sort of things did you find helped to ease it?
>
> Patient: Just mainly relaxing and not being upset about it.
>
> Researcher: How did you do that?
>
> Patient: Oh, just lay quietly and try to think about something else.
>
> (M.P., Anglo-Australian female)

The Yugoslav patient in this category believed that having someone to talk to about the pain and feelings generally, helped to ease the pain (see patient K.R.'s comments, page 140).

And finally, several patients used a combination of both physical and psychosocial measures which they described as helpful. In the following extract, the patient, a young Anglo-Australian woman, was suggesting that pain was primarily in one's mind so that one could make oneself feel either better or worse:

Researcher: Did you manage to make yourself feel better?

Patient: Hmm, like Sunday (3rd post-operative day) when B. (husband) was going home, I felt really down, and I knew I had to feel well or he wouldn't have gone home. I had to pick myself up. And today, for instance, after I had a shower, I started to feel 'Oh, what the heck' you know? But then, you sort of think, 'I'll go and comb my hair and do a little bit of something, and buck yourself up. You've got to, otherwise you'll never pick up.

Researcher: What did you do to make yourself feel less sore or more comfortable?

Patient: Well, I sort of talked about other things to forget about it, because, I think, if you lie there moaning about it and hollering, you are only going to worry about it. Whereas I read, done things that were uncomfortable to do, but they meant more than the pain.

(B.M., Anglo-Australian female)

In summary, most patients commented that during the early post-operative period there were no measures other than drugs and maintenance of a still position which relieved the pain. In relation to the later stages of recovery, nearly one half of the Yugoslav patients, but less than one sixth of the Anglo-Australians, suggested that there were no measures, other than analgesic drugs, which were perceived as relieving pain. This finding may, in part at least, be due to the fact that suggestions on helpful, pain-relieving measures were usually not made to the patients, or not made with sufficient clarity. It is also likely that Yugoslav patients, in particular, expected experiences such as pain to take their natural course, and therefore did not expect that any measures would be beneficial. Over one half of the patients did suggest that physical measures such as walking were helpful in relieving pain, while a much smaller number reported that various forms of distraction were also helpful.

A QUESTION OF COMPANY

The ninth question to which the study addresses itself is as follows:

What preferences do patients express with regard to the presence or absence of others (staff, friends, family) while experiencing pain?

The issues raised so far in this chapter have been related to the role and perceived effectiveness of analgesic drugs, and to the significance of other pain-relieving measures and activities. The nature of the data collected during this study, however, indicate that the contribution which others (through their company) have made to the patient's experience of pain, should be considered within the context of pain relief. While the links were not always clearly perceived by the patients, they did express certain preferences with regard to the presence or absence of others while experiencing pain.

As has been stressed earlier, pain is a subjective experience so one cannot know the pain of another. Thus, to a large extent, pain is a private experience. At the same time, pain-related behaviours are designed to communicate the presence of pain to others, thus to some extent making the experience of pain a shared one. While recovering from surgery, patients in hospital are denied complete privacy so that their behaviour, including pain-related behaviour, is open to scrutiny by staff, other patients, and visitors. At the same time, the opportunities to share with others one's experiences (including that of pain) are limited, since staff have other patients to care for and visitors can only spend a short period of time with the patient. Therefore, whether the patient wishes to be left alone to suffer his pain in private, or whether he wishes to have others around him all the time in order to share his experience, the environment of the hospital usually prevents either option from being completely satisfied.

In terms of their expressed preferences, and observed behaviours, patients were categorised into five groups:

(1) those who expressed a preference to be left alone and who did not wish to have visitors present when in pain;

(2) those who did not wish to have visitors, but were motivated primarily by a desire to protect others;

(3) those patients who wished to have visitors, primarily for the emotional support they derived from such encounters;

(4) those patients who wished to have visitors, but mainly for instrumental reasons; and

(5) those patients who were either unsure, or expressed a mixture of preferences.

As can be seen in Figs 6.7, 6.8 and 6.9, the differences between the Anglo-Australian and Yugoslav patients were appreciable, with the majority of the former preferring not to have visitors while in pain, and the majority of the latter expressing a desire to have visitors. Of the 14 patients who expressed a preference for being alone when in pain, 13 were Anglo-Australian. The main reason that patients gave for wanting to be alone was that having others around them required energy, to talk and to entertain the visitors, when the patients felt they lacked the energy. The following comments were typical of the Anglo-Australian patients:

> It tires me out talking and that, you know? All the talking...I had a lot of visitors last night. My husband was delighted to think I had so many people come and see me at once ...and I was so pleased when they went. They were all darlings and I love them all, they were so nice to me, but when they went I was so relieved and I thought, 'Thank heavens, they've all gone!'....When you are not feeling well you don't feel like a lot of chatterboxes around you trying to cheer you up, because it's very tiring. It's very tiring to try and make conversation with them all...last night I was so pleased to see them all go....No, I just wanted to lie quietly and still, and not have anyone....I didn't want anyone around me...
>
> (A.R., Anglo-Australian female)

Most of the patients who expressed a preference for privacy or solitude when in pain mentioned that once their pain had abated and they began to feel better they enjoyed having visitors, or at least some visitors for some of the time. For example:

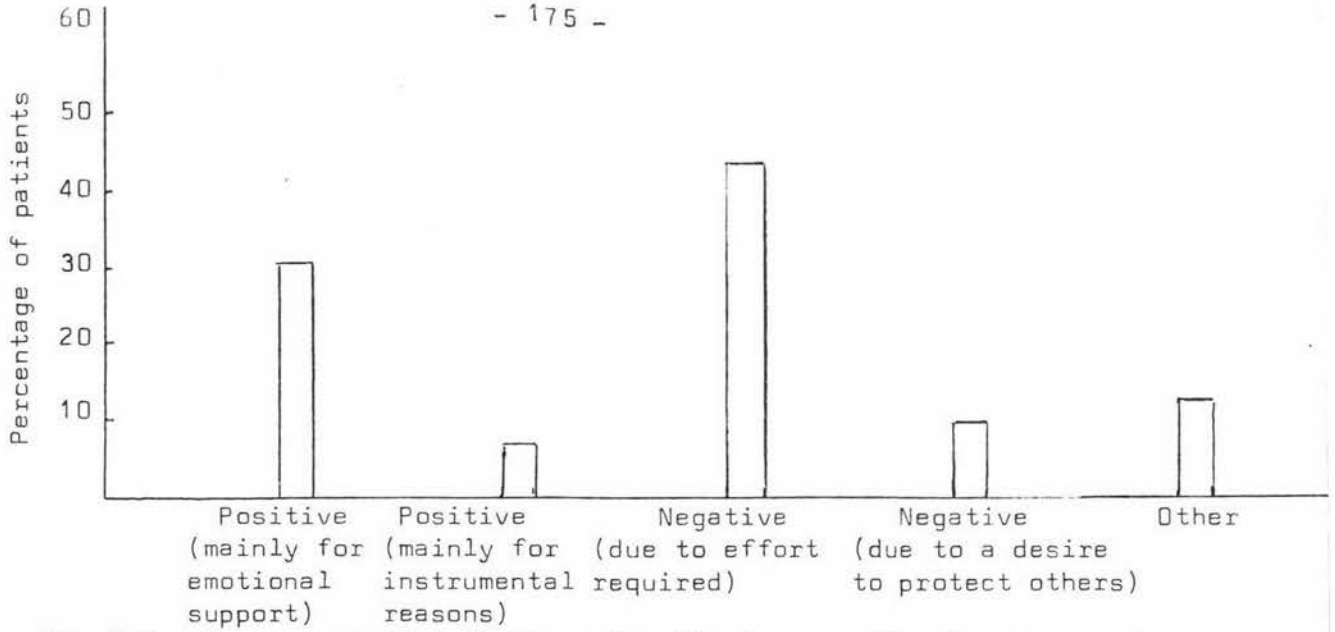

Fig 6.7 Percentage distribution of patients according to expressed desire for visitors when in pain (total group)

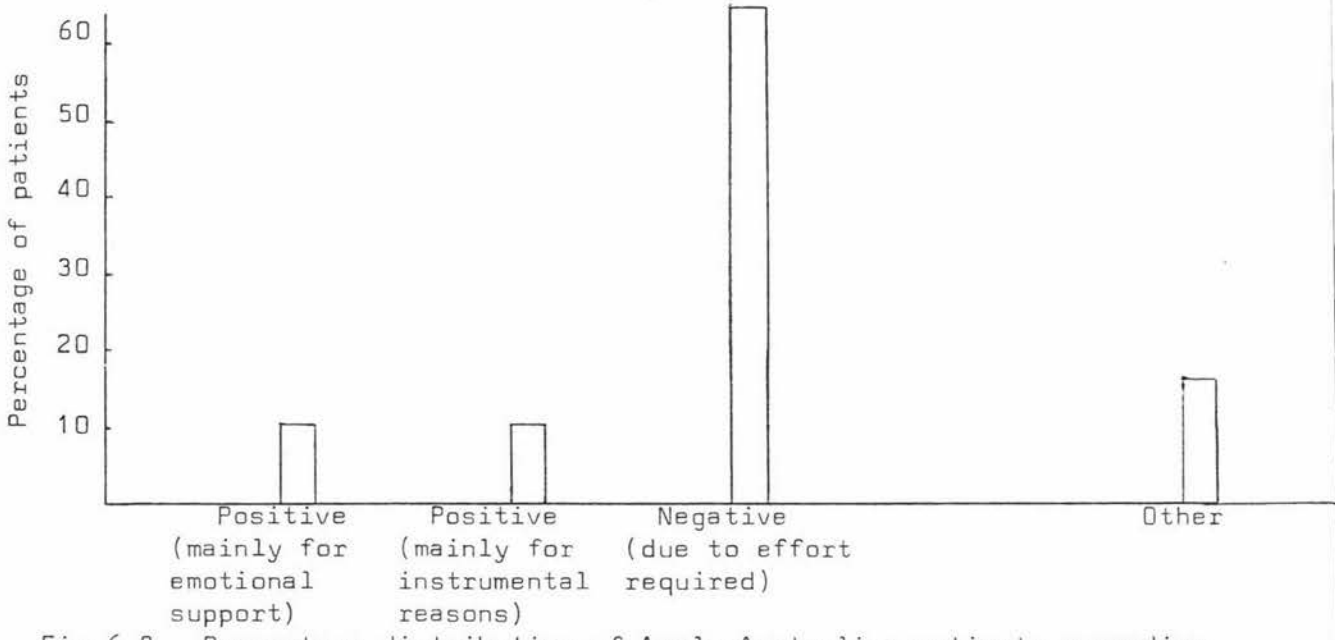

Fig 6.8 Percentage distribution of Anglo-Australian patients according to expressed desire for visitors when in pain

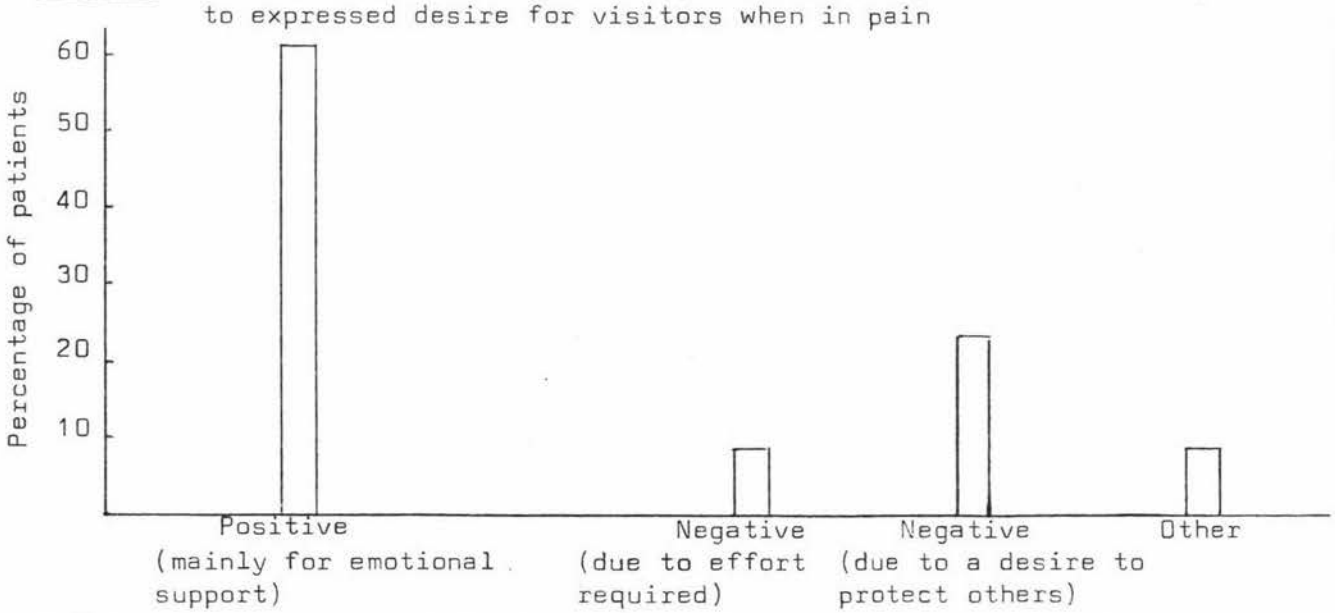

Fig 6.9 Percentage distribution of Yugoslav patients according to expressed desire for visitors when in pain

Patient: I think it depends how sick you are, you know, in that first thirty six hours. I didn't want to see anybody, I just didn't want to see a soul! I was just too sick, but once the tide had turned I was really glad to see people.

Researcher: What about when you had that severe pain...?

Patient: Oh, I preferred to have been alone. I was too sick to care about anybody else being around.

Researcher: So, you were not looking for support from them?

Patient: No, I just felt I just had to bale it out myself.

(J.B., Anglo-Australian female)

...I get like, I tell them, 'Don't even bother coming in, like, not at the moment. When I can get up, starting to go out on the verandah and all that, then you can come in.' I'd like that, but while I am just here...I tell my wife, if she wants to come in sort of thing...I am always glad to see her, but all the rest of them, to friends I say, 'Oh, don't bother...if you want to come in, just come in say for five minutes, just so you've been in!, that suits me. Like, they are happy and I am happy...but for them to come in and sit down here for an hour or two, you know, I just go nuts...Like, at times I get annoyed, I would say, 'Oh God, I don't feel like anyone' and they would come. Like my brother-in-law, he comes at eight o'clock...rain, hail, or snow, and he asks me the same questions all the time. I just say 'Yeah', like, I can't turn him away with my eyes closed.

(D.P., Anglo-Australian male)

Patients also mentioned that they saw themselves as private or solitary persons, and therefore their desire to be alone when in pain could be seen as a reflection of their personality. Another reason given was that visitors at times put extra demands on the patient. A number of patients, for example, said that visitors did not come to reassure the patient, but to reassure themselves:

Researcher: What about when you were in pain, did you want members of your family or friends around you at that time?

Patient: No, I didn't give them a thought....I wanted to know that I could have assistance from the staff if I required it, which I did have, but I was quite happy to be by myself and put up with the pain...I think it depends on what sort of person you are and how prepared you are for it before you come. I didn't expect to have any visitors at all, I was quite prepared not to have a visitor, but then my parents came to see me...and it was really nice to have visitors, and then again, it's not always, it's not as good as you would think, you know, having visitors either. Sometimes they get obviously bored and you can't think of things to say...

Researcher: Do you feel that you have to be alert and be able to talk with them when they come to see you?

Patient: Yes, you do really, and you know, if your visitors are going to get upset, well, it doesn't do you any good. My mother walked in to see me and burst into tears, and I had to comfort her, which you know, it gets a little bit difficult.

(M.P., Anglo-Australian female)

Finally, with regard to those patients who did not wish to have others around them when in pain, some gave instructions to their family and friends not to visit them during the early stages of recovery, or even throughout their hospitalization. The main reason given was that visitors would be unable to help the patient in any way, and therefore there was not much point in making the journey. One patient expressed his views in the following way:

I don't need visitors. I am one of those ones, I'd say to the wife 'Now look, let's have a bit of common sense...now don't bother coming out, I'll be all right, I'll be home in a week', and that's the exact words. 'Have a rest on me, read a book, and I'll be back at the front door in a week's time.' I like to be completely ignored, left on me own, I'll work it out myself, I'll go away and have me thing fixed up and come back gain. I don't want visitors, definitely not! As I said, I got cranky when the wife came

> over and I was in pain; she came the Tuesday and I was operated on the Monday, she came the Tuesday, while I was right at the peak of me nastiness...I got on the phone the next day and apologised, when I felt that much better. As I said, I told her at home 'There is no way in the world you can...you can't console me. I've got the thing, I know what it is, and no words in the world will console me, the only way I can be consoled is the thing, the pain to stop, whatever it is, you can't console me.'
>
> (R.P., Anglo-Australian male)

In the case of three Yugoslav patients the reasons were somewhat different from those discussed thus far. The main reason for not wanting to have visitors, was the desire to protect others, particularly their own children, from seeing them in pain:

> ...in connection with whether I wanted members of my family with me...No, I didn't want them to see how difficult it was for me. I don't believe that anyone would wish to give such worries to one's family.
>
> (B.L., Yugoslav male)

> No, I didn't want anybody. When it hurt the most, I felt it was easier when I was alone, so that no one would see how much I was suffering. At that time, I told them (husband and children) to leave me, to leave and go home.
>
> (I.L., Yugoslav female)

The last extract also illustrates another point of difference between Anglo-Australian and Yugoslav patients. While members of both groups felt that talking to visitors required a great deal of energy, the Anglo-Australians nevertheless made the effort to appear sociable, out of a sense of obligation, while Yugoslav patients in similar circumstances seemed less prepared to make the required effort, to be amenable or sociable. In contrast to patient A.R. (see comments page 174) who tried very hard to be cheerful when her visitors came, or patient D.P. (see comments page 176) who hinted to his visitors that he would rather be left alone, several Yugoslavs described occasions on which they had openly indicated their inability to cope.

> On Saturday, a lot came, there were twelve of them all at once, that was too much. I couldn't even talk with each one, it was noisy, so I told them 'Don't stay too long, I can't talk much and I can't stand the noise', so they left. It's good to have visitors, but not too many.
>
> (S.Q., Yugoslav female)

As shown in Figs 6.7, 6.8 and 6.9, the majority of the Yugoslav patients expressed a preference for having others around them when in pain. On the other hand, only two Anglo-Australian patients expressed the same preference. The main reason given by these patients for wanting to have visitors was that they were able to derive emotional support from them. In most cases the visitors were members of the patient's family, although in one case (where the female patient was unmarried and had no other relatives) there were daily visits by friends from a church community. Themes readily apparent in the comments of these patients involved feelings of security and protection in the presence of visitors, feelings of well being in the knowledge that others cared about them, an ability to relax and forget about pain, and courage to suffer whatever pain or discomfort was still present. The following comments were typical:

Patient: It is very important (to have visitors)...because you feel easier, knowing that someone is thinking of you.

Researcher: What about that first day when you were so ill and had a lot of pain, did you want someone with you then?

Patient: I did, all the time. I felt easier when they were with me ...How can I explain it to you? I was glad to have them by me. I know that they love me, so that, I was more calm and more brave. I don't really know how to tell you.

(O.F., Yugoslav female)

The first day, they came...I felt I was putting them to a lot of trouble...I couldn't even talk with them. I'd look at them and then fall asleep. But I was glad, I was very glad to see them, at least during the moments when I was conscious. I was glad that they came, because at the most difficult time I could see that I had someone by me.

(D.Y., Yugoslav female)

Patient: Visitors? They make you feel better; you have someone to talk with; forget the pain a little; the time goes faster...I wanted my daughter and my husband, not others...I felt better when they were with me.

Researcher: Did you feel that you had to talk to them...?

Patient: No, just to see them. Sometimes I couldn't even speak, sometimes I couldn't...When I saw them, I felt better.

(Z.C., Yugoslav female)

Researcher: How important was it for you to have visitors?

Patient: Oh, very important. Like I said, last night, I didn't think anybody was going to come and I was in tears, you know...

Researcher: Why? What did you feel at that time?

Patient: I felt very lonely...and I was, sort of, scared...I don't know... I can't really explain it. I just have to have people that love me, otherwise I think I'd die, I don't know.

Researcher: Did it help to make you feel better, when the visitors were there?

Patient: Well, it gives me something to do, watching them talk. Actually, they were talking to each other and I was just sort of listening in, but even that I didn't mind, it was just them being there that made me feel good....

Researcher: What about when you were in pain?

Patient: Oh, yes. As a matter of fact, most of that first night (after the operation) I'd wake up and I'd think David was there. I'd sort of feel that he was there, because, before...while I was going down to the theatre he came down all the way with me and he just left me at the door...He was with me all that time, and I just felt he was still there, because he was holding my hand, and when I was asleep I'd still think he was there,...and I'd look up to sort of look at him and he wasn't there. But I was also sick the first night, but I wanted him to be there....

Researcher: Why do you think you wanted him there?

Patient: I suppose, to give me confidence and tell me that everything was going to be OK, that I was going to be OK....

Researcher: ...you seemed to sleep more and relax more when he was there, whereas when he wasn't and I would come in, you seemed restless and looking for him.

Patient: Yes I was. I slept a lot of times when he was here. I don't know how he felt about it, I felt sorry for him, I can't explain it, but he was sitting there while I was asleep...

(E.V., Yugoslav female)

In contrast to the majority of the Anglo-Australian patients who wished to be alone when in pain but wanted to have visitors once their pain had subsided, the majority of the Yugoslavs stated that they wanted their families to visit and stay with them during the early post-operative period, but were quite happy to be without visitors or at least close family members in the later stages. One Yugoslav explained her feelings in the following way:

> Just my husband. I didn't want others to come. I didn't want my children to come, I didn't want them to see me sick, to be upset, to cry because of me. Just my husband. I wanted my husband to come, to visit every day while I was bedridden. Later it didn't matter if he did not come. Later, I had children and others, I didn't mind it later.
>
> (J.O., Yugoslav female)

The two Anglo-Australian patients (who preferred having others around them when in pain) expressed views similar to those cited above, stressing the importance of having their loved ones close to them and being able to relax as the result of their presence. But somewhat different reasons were given by two other Anglo-Australians. They felt that it was helpful to have visitors to perform those tasks which the patient himself was unable to perform, such as getting a drink of water or rearranging a pillow. As one patient expressed it:

> I was pretty lucky to have my wife there for most of the time, you know, the first week, and that did help me a lot, to do little things that I probably wouldn't have bothered asking a nurse to do, or, you know, bothered anyone with...She was helpful to me then...I suppose she wanted to come, and she helped me...
>
> (F.C., Anglo-Australian male)

And finally, there were four patients (three of whom were Anglo-Australian) who were either unsure or expressed a mixture of preferences as regards the presence of others when in pain. One of these patients expressed her feelings in the following way:

> When I think about having visitors, except for a couple of people, I don't really want to see them. I can take it, or leave it. I'd be quite happy to sort of sit there and watch TV ....People do it because they want to be reassured, not because they want to reassure you, well, they want to reassure you but they can't really...like my mother would obviously come to sort of boost my spirits too, but to reassure herself too....Especially in a situation like immediately after the operation, you know, people feel they can do something for you, but unless you've been there yourself, you realize that you can't, because...there is nothing that needs to be done sort of thing...Although, I suppose it's nice if you can't talk or something, if you have someone to be able to go and demand things for you like pain killers, or cold washes, or something like that....But my attitude to visitors was really, well, you know, I'd sort of be able to take them or leave them, but I found when I did have them I enjoyed it...so I think they are important.
>
> (A.A., Anglo-Australian female)

Whatever their attitudes towards family or friends, however, most patients expressed very similar positive views towards having staff, particularly nurses, around them when in pain. The majority, both Yugoslav and Anglo-Australian, wanted nurses to be within easy call, perhaps checking regularly that they were not in need of anything. Patients also stated that they wanted nurses to be both prompt when they requested help (particularly when they asked for pain relief) and to be understanding and sympathetic. One patient expressed it as follows:

> Yes, I wanted the staff to come in and frequently see how I feel, you know. Makes you feel better I think, if they take an interest in how you are feeling, but if you are sick and you don't see anyone around you, and you've got to ring or get someone to go after them, it's dreadful...but if they just keep popping in and out and seeing you, not staying, just popping in to see if you are all right...makes you feel better...then I am quite contented to rest...
>
> (A.R., Anglo-Australian female)

While expressing similar feelings, Yugoslav patients tended to place more stress on the psychological support which nurses were able to provide.

> ...when a person sympathises with you, it sort of, helps a little bit...like you are upset anyway when you have pain, and you feel a bit lonely, and nobody's there, and when they come by and they sort of pity you a little bit, sympathise with you, and they ask you if there is anything they can do, they sort of straighten you up, or lie you down, or something like that, it does make you feel a little bit better. Just being caring a little bit, it made it a little bit easier for me.
>
> (E.V., Yugoslav female)

> When I was in pain, I liked to have (a nurse) close by, to help me if I needed it, but I didn't feel that I wanted someone to sit with me...I've noticed some sisters and nurses really understand, with feeling, with greater feeling than others. They are not all the same ....There are some that are very good, you really see that she understands that you are in pain, and that she really wants to help you.
>
> (O.F., Yugoslav female)

Thus, it can be seen that the majority of the Anglo-Australian patients expressed a preference for being alone when in pain, stating that talking with visitors and staying awake required a great deal of effort. At the same time, patients commented that visitors could do little to reassure them or make them feel better, except perhaps by performing tasks which they were unable to perform for themselves. The majority of the Yugoslav patients, on the other hand, expressed a preference for having others around them, particularly during the early post-operative period. Visitors were seen as providing emotional support by their reassurance, and by their ability to make the patient feel more secure and relaxed. A smaller number of Yugoslav patients, who expressed a preference for not having visitors when in pain, stated that they wished to protect others, particularly their children from seeing them in pain. Both the Anglo-Australians and the Yugoslavs expressed a wish to have nurses within easy call, carrying out frequent checks to ensure that patient needs were met promptly, and with a caring attitude.

SUMMARY

The routine nature of many surgical procedures and the accepted (typical) trajectories of post-operative pain may be used to suggest that relief of such pain is a relatively simple task. However, the findings of this study would suggest that the process of obtaining relief from pain is complicated by a number of factors. While patients perceived analgesic drugs as the mainstay of pain relief, there were also areas of ambiguity and seeming contradictions. Thus, for example, most patients appeared to accept that decisions about the amount and frequency of administration of analgesic medication were the prerogative of hospital staff, even though they experienced considerable pain during the first few days after surgery, especially between individual doses of medication. These findings are similar to those of Hannington-Kiff (1974), who reported that while patients may experience dissatisfaction with the management of their post-operative pain they will not necessarily express this dissatisfaction to the staff. At the same time, while hospital staff may emphasize risks of addiction by terminating administration of narcotics after a relatively small number of doses, patients do not appear to share this concern. In this study, they were more concerned with the severity of pain and their perceived need for relief, and both Anglo-Australians and Yugoslavs regarded injections (of narcotics) as more effective than tablets (of milder analgesics), particularly while their pain was still severe. This latter finding, while in line with Minc's (1963) and Pasquarelli's (1966) observations (see discussion page 31), also provides evidence that such attitudes towards drugs are not restricted to southern European cultures.

The study also found that few measures, other than drugs, were perceived as helpful in the relief of pain. Those measures used, appeared to be the result of self-initiated attempts by patients to find additional means of coping with pain. It seems that, as suggested in other studies (e.g. Billars, 1970) (see discussion in Chapter 2 page 18), to be effective, simple measures such as special positioning need to be made a part of deliberate nursing action and their pain-relieving properties communicated clearly to patients. The finding that only a minority of patients, when evaluating the adequacy of pain relief retrospectively, regarded the amount and

frequency of analgesia as inadequate, may be related to Copp's (1974) findings that once their pain had subsided patients found it difficult to answer questions about it because they were in the process of denying and forgetting.

Finally, the expressed preference of most Anglo-Australians to be alone when in pain, reflects the behaviour of "old American" and Irish subjects reported in Zborowski's (1969) study, as well as the expressed preferences of both White and Black Americans in Reynolds' (1974) study, discussed in Chapter 2 (pages 30-34). The finding that most Yugoslavs preferred to have others, particularly family members, with them when in pain, may be seen to reflect their need to share the experience - a cultural value noted among eastern Europeans (Minc, 1963), and also found among the Jewish and Italian subjects in Zborowski's (1969) study.

Chapter 7

PROSPECTIVE AND RETROSPECTIVE EVALUATION OF THE EXPERIENCE OF PAIN

> No, it wasn't what I expected. I didn't think it would be...so much, you know...uncomfortable and painful as it was....All the operations I've had before, of course, have never been anything like that, and I just didn't expect it to be that bad. Now that I know, well, I wouldn't want to do it again.
>
> (H.T., Anglo-Australian male)

Presentation of the patient's experience of pain would be incomplete if the actual period of time during which pain was felt were to be isolated from the events which preceded it and those which followed. As Copp (1974) has noted, expectation or anticipation of pain is an important component of the total experience. People admitted to hospital enter a foreign territory which is subject to rules and standards of behaviour that are different to those of the outside world. Being admitted for surgery, even very ordinary or routine surgery from the medical point of view, for many people means uncertainty, concern, and sometimes fear. The first part of this chapter therefore looks at fears and concerns expressed by patients prior to surgery, with particular reference to anticipated pain.

In the second part of the chapter, attention is directed toward evaluation of the experience in terms of the fulfillment of pre-operative expectations and evaluation of the most positive and the most negative aspects of the experience. For a researcher interested in pain, it would be tempting to consider pain as the central and overwhelming issue within the broader experience of surgery and hospitalization. While this may well be the case, it is nevertheless necessary to explore the question further and to place it within a broader context. This section of the chapter therefore presents retrospective views of the total experience, allowing patients to focus on those aspects of special significance for them.

PRE-OPERATIVE FEARS

The tenth question to which the study addresses itself is as follows:

What fears or concerns do patients have before surgery, and does pain or fear of pain feature among these?

Items which attempted to elicit answers to the above question were usually placed toward the end of the first interview. Most patients provided at least some comments in reply. As illustrated in Figs 7.1, 7.2, and 7.3, a small number stated that they had no fears or worries. Generally, their behaviour tended to support their verbal statements which typically contained some degree of rationalization:

> ...it doesn't worry me, not if I think that I've got to go. The quicker I go, the better it is...you know, getting it out of the way. I'd rather (have the operation) than sit around waiting.
>
> (S.A., Anglo-Australian male)

Some patients tended to adopt an accepting attitude which contained elements of fatalism:

> Why should I be afraid? If it's good, good - if not?! What must be, must be.
>
> (M.A., Yugoslav female)

In the case of two patients, however, verbal statements denying any fears were not supported by their non-verbal behaviours. In one of these cases the patient appeared anxious throughout the interview. Her reply to whether she was worried about the surgery was:

> I don't want to think about it....Actually, I don't even think about it, that I am in hospital or I am going to have an operation ...I just have no feeling at all...
>
> (K.B., Yugoslav female)

The most commonly expressed fears concerned the findings during surgery and their implications for the future (the diagnosis and prognosis). The possibility of a malignancy being detected was frequently alluded to, particularly if there was a family history of cancer. But there were other concerns as well, as in the case of one patient who stated:

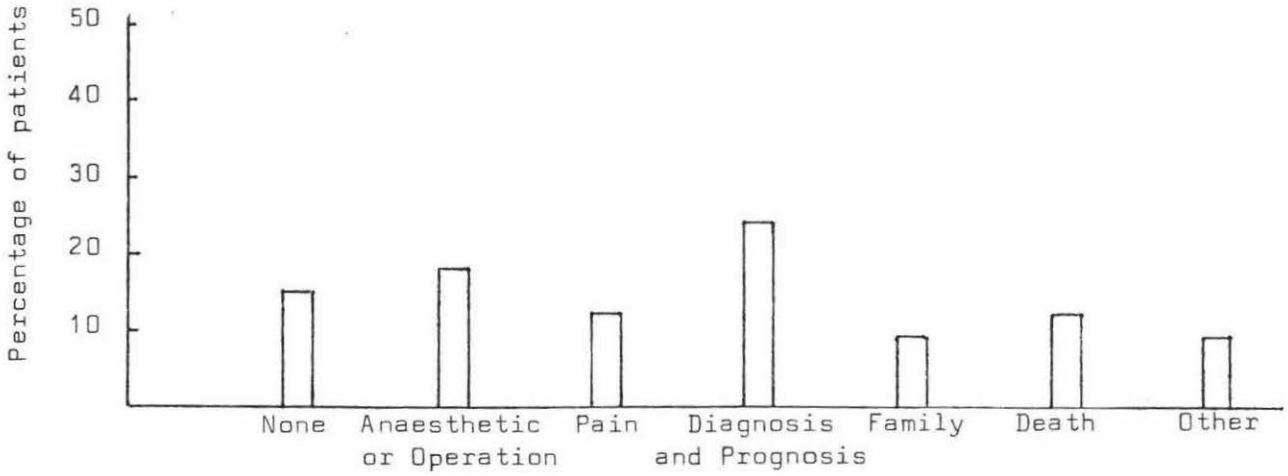

Fig 7.1 Percentage distribution of patients according to dominant fears or concerns expressed pre-operatively (total group)

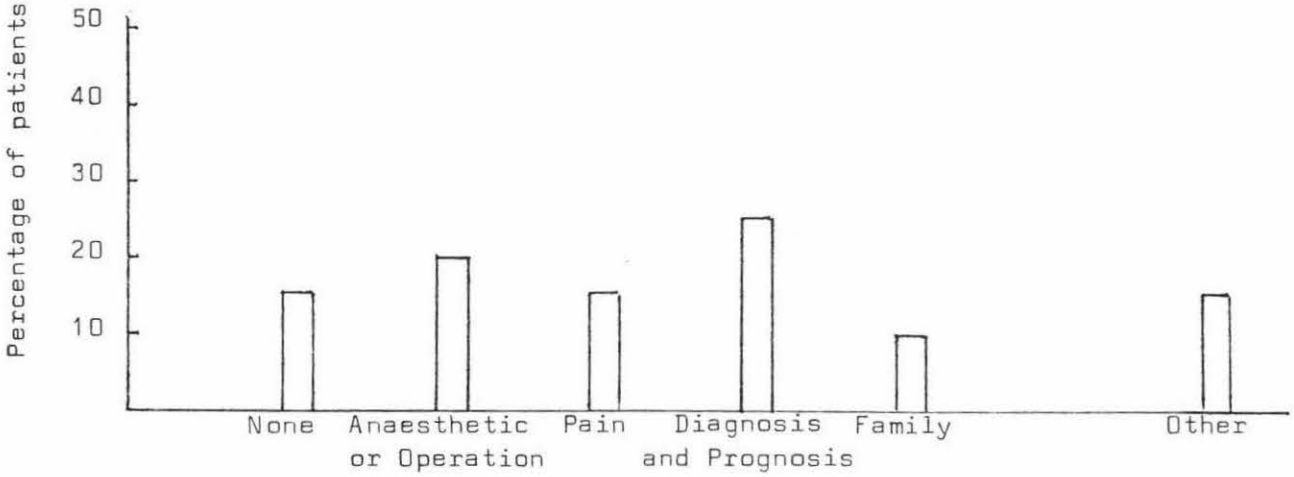

Fig 7.2 Percentage distribution of Anglo-Australian patients according to dominant fears or concerns expressed pre-operatively

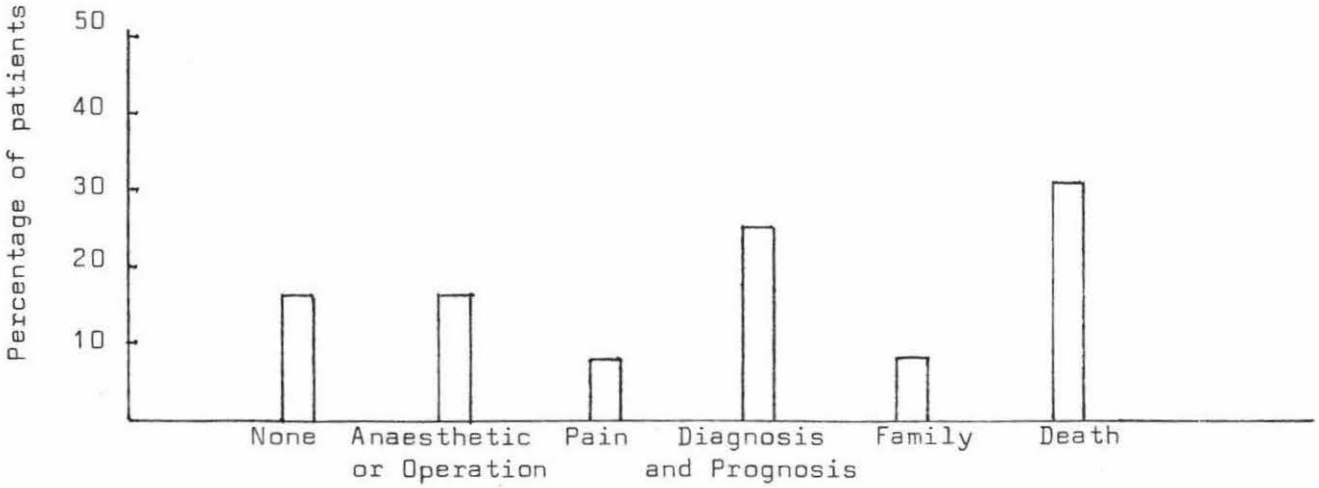

Fig 7.3 Percentage distribution of Yugoslav patients according to dominant fears or concerns pre-operatively

> ...I don't see death as being the worst possible thing (that could happen)...What could be the worst possible thing? I think probably to be bed ridden for a really long period, you know, for the rest of my life ...I don't know if I could cope with that very well.
>
> (A.A., Anglo-Australian female)

A substantial number of patients were also worried about the anaesthetic and the actual surgery. Frequently, they recalled past experiences of being wheeled into the operating room, being confronted with unfamiliar faces and machinery, and consequently a desire to run away. Having general anaesthetic was seen as the ultimate loss of control over one's person. As one patient explained:

> I think I am afraid of losing control as I go under the anaesthetic...I think that is what it boils down to!...you could walk out (of hospital) any time that you wanted to, but not from under the anaesthetic. They've really got you there.
>
> (J.B., Anglo-Australian female)

None of the Anglo-Australian patients expressed direct concerns about death, even though two mentioned the death of a parent. On the other hand, four Yugoslav patients talked at some length about the possibility of dying. Interestingly, however, all expressed a positive desire for life or lack of preparedness to die at this time. None of the four expressed a fear of death itself. The following two examples illustrate the feelings expressed. In the first example the patient was remembering the thoughts she had had earlier in the day.

> I thought I would not wake up (from the anaesthetic), I thought that I would die... I didn't think about myself, or my mother or father...I just remembered S. (a step-daughter) and my niece and nephew...I remembered the three of them, and I thought, 'dear God, I am going to die and I am not going to be there to make merry at their wedding.' That's what came to my mind...
>
> (S.Q., Yugoslav female)

Researcher: How do you feel about having to have this operation?

Patient: I am very scared. It's very difficult for me.

Researcher: Why is that?

Patient: Why?! I am going to have an operation; I am not going to a party. It's hard. I am afraid all the time. I am nervous, whether the operation will be a success...I am not yet so old as to think 'ah, my time has all gone'. It is not like that... that's why it is difficult for me.

(J.O., Yugoslav female, 42 years)

A number of patients also worried about their families and particularly young children. This type of concern was particularly noticeable among Yugoslav women who felt the lack of extended family supports. As well as being concerned about the family's ability to manage during their time in hospital, these patients also expressed anxiety about their own future health and survival and the effects of this on their families.

Only four patients (12.1 percent) expressed fears or concerns about post-operative pain - three of them were Anglo-Australians. On the other hand, 17 (51.5 percent) stated that they expected some pain after the operation; nine (27.3 percent) said that they did not know or were unsure how they would feel post-operatively; four (12.1 percent) stated that they expected to feel well with no pain, and three (9.1 percent) simply did not wish to think about how they might feel.

A number of patients stressed the importance of information in relation to pain. Some who expected pain mentioned that they had been told about it by the anaesthetist or the physiotherapist - and that but for that information they would not have known what to expect. Similarly, patients who expressed uncertainty about post-operative pain also said that they had wanted to find out, but were prevented either by their own reluctance to ask questions or the perceived lack of time on the part of the doctors. (None of the patients mentioned nurses as a possible source of information).

Of the four patients who expressed fear of pain, two (both female) were afraid of the operation starting before they were fully anaesthetised. This fear of inflicted pain was clearly expressed by one patient who stated:

> I am so afraid that I will feel the operation, like, I will feel when he (the surgeon) is cutting me.
>
> (E.V., Yugoslav female)

Others expressed fears of invasive procedures such as a cystoscopy or catheterisation. Fears that such procedures would be carried out without any anaesthesia resulted in anxious searching for information, as in the following case:

> The only thing I am concerned about is having a catheter inside, that's the thing that bothers me...Certainly when it's going in it will be rugged. Is it done under anaesthetic, or is it just poked in without anaesthetic? ...So I thought, 'You are getting it cold', you know, 'will I be able to withstand it?' ...I can withstand certain pains, but I've got a phobia of anything being probed inside me...
>
> (R.P., Anglo-Australian male)

The need to be seen as capable of withstanding pain (and thus play the "good patient" role) gradually became evident among the Anglo-Australians during the post-operative period. But even before surgery, one patient verbalized concerns that others only alluded to as they awaited surgery:

> Oh well, there is one thing....I hope I come through successfully, to endure a little bit of pain, you know. You don't like to be a bit of a fool...well...I think everybody, I'd say most people, they don't like to display a lot of pain, they like to say...'the bloke next door is having just as much pain as I am and he isn't saying anything, why the heck should I be?' But of course, each person's make up is different as we all know, so maybe I can't stand pain like the fellow next door, and that's what you find out.
>
> (Q.B., Anglo-Australian male)

Thus, it can be seen that the majority of patients in the study, although admitting the possibility of post-operative pain, either

minimized its significance or perceived other issues such as the outcome of surgery as being of greater concern. Those patients who openly admitted their concerns about pain expressed fear of inflicted pain and their possible inability to endure the pain.

THE FULFILLMENT OF EXPECTATIONS

In considering this topic a set of questions was formulated as follows:

How closely does the experience of this surgical operation relate to the patient's pre-operative expectations? If disparity occurs, what reasons are given for the disparity between the expectations and the actual experience, and to what extent does pain feature as a reason for such disparity?

During the final interview patients were asked to comment on how closely their experience of hospitalization and surgery resembled their pre-operative expectations. Only two stated that they found the question difficult to answer and that they were unsure of their expectations. One quarter of the patients (five Anglo-Australians and three Yugoslavs) stated that their experience was very close to what they had expected. A smaller group (of two Anglo-Australians and three Yugoslavs) commented that the experience was better than what they had expected. However, the majority of the patients (six Yugoslavs and 12 Anglo-Australians) believed that the experience was worse than they had expected it to be (see Figs 7.4, 7.5, and 7.6).

In analysing the reasons that patients gave for their replies, it is apparent that the intensity and duration of pain played an important role in determining the quality of the experience. Among those patients who said that their experience was close to what they had expected pre-operatively, all three Yugoslav patients, but only one of the five Anglo-Australians, mentioned pain. Usually, Yugoslavs commented that they had expected some pain, even severe pain, and that their experience confirmed their expectations. The following comments were typical:

> No, it wasn't different. I did expect the pain, only I've never experienced it. But now, I've experienced it. It was fairly much as I thought it was going to be.
>
> (O.F., Yugoslav female)

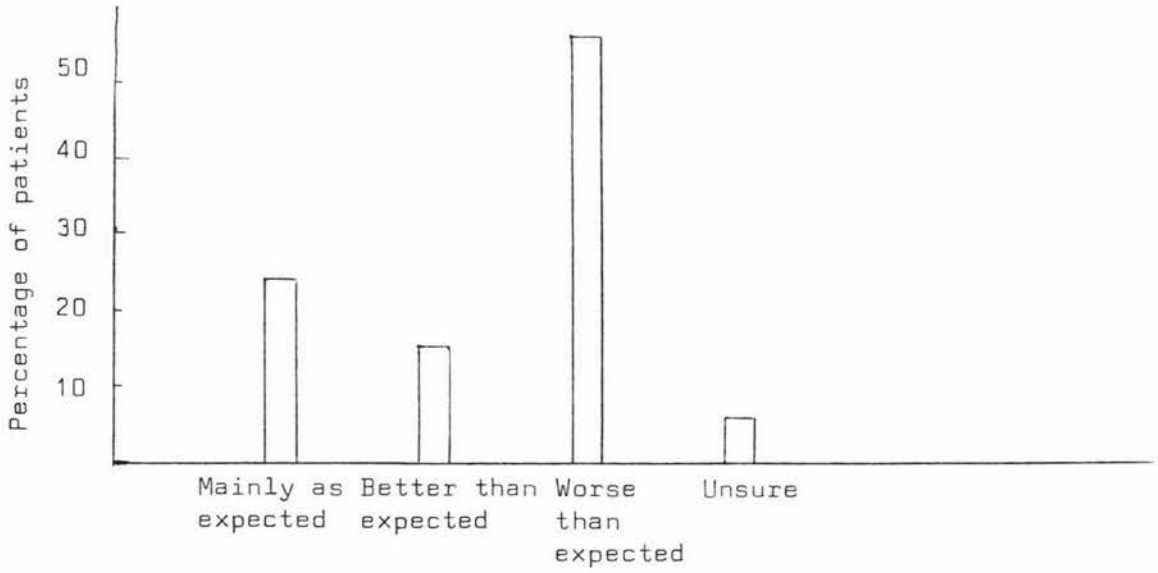

Fig 7.4 Percentage distribution of patients according to retrospective evaluation of the total experience (total group)

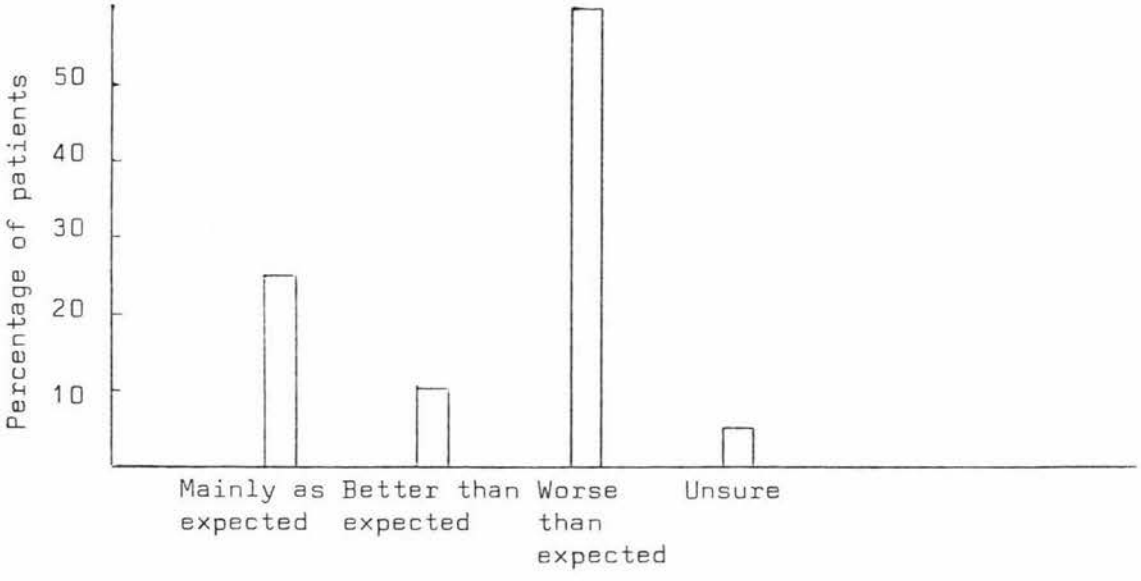

Fig 7.5 Percentage distribution of Anglo-Australian patients according to retrospective evaluation of the total experience

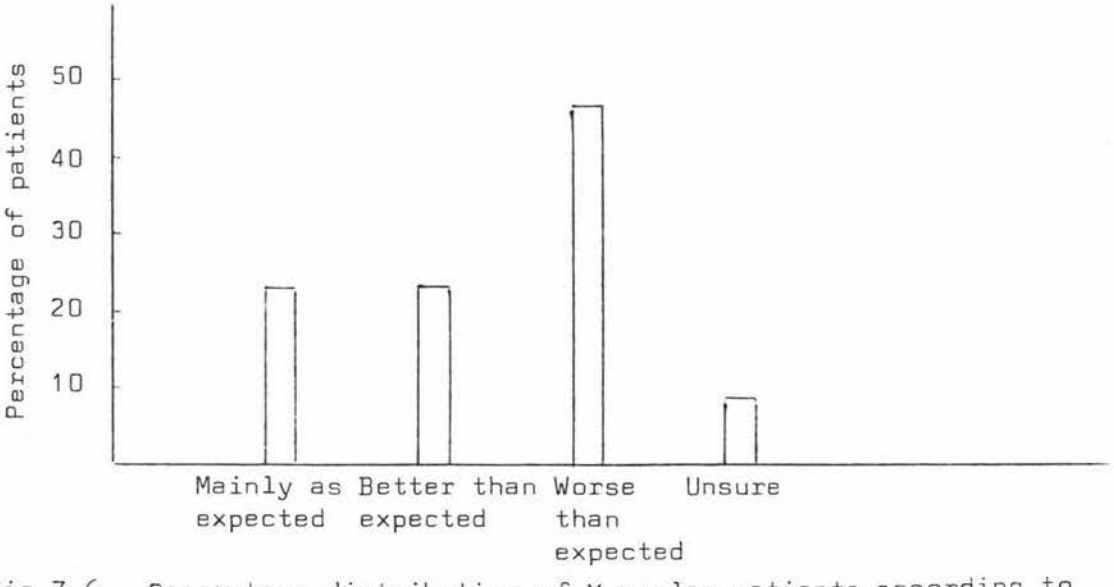

Fig 7.6 Percentage distribution of Yugoslav patients according to retrospective evaluation of the total experience

The Anglo-Australian patients, on the other hand, tended to comment on their experience without mentioning pain, as in the following example:

> Well, the impression...after it was over is what I really expected of it when I came in. I planned myself for it, and it's just what I made up my mind to do, and it's what I expected....Other than the tube in the stomach which I was a little bit worried about, when I first saw (it) there. I didn't really expect a tube...nobody told me about the tube, and I was a little bit concerned whether I should move or whether I shouldn't, when I used to feel it poking me inside... But, when they told me that it was quite all right, I just accepted that too.
>
> (E.B., Anglo-Australian female)

Of the five patients who reported their experience as better than expected, one Anglo-Australian and two Yugoslavs mentioned pain. Typically, patients explained that their pre-operative expectations included fears of considerable pain, which did not eventuate post-operatively. This does not mean that they experienced no post-operative pain, rather, the pain they experienced was either not as severe or did not last as long as they had expected. In the following extract one patient describes her experience:

> Patient: It was much easier than what I had expected.
>
> Researcher: Why do you think it was easier?
>
> Patient: The pain did not last long...I had strong pain, after the operation, for one night. For one night I had a lot of pain, and they gave me injections. But since injections are given, they told me, every four hours, but the injections last two hours, those two hours when I was not allowed injections the pain was very strong. But, since it was only one difficult night, it was much easier than what I had expected....I expected a difficult operation and problems afterwards, but it was all easier, easier and more successful than what I had expected...All my worries were unnecessary, the operation was a normal operation.
>
> (I.L., Yugoslav female)

Other factors which contributed to the experience being better than expected included absence of vomiting, absence of headaches, a successful outcome of surgery, and rapid recovery. One of the patients put it this way:

> I didn't expect to get well as quick as I did, to get this strong as quick as I did, I thought I'd be a lot weaker for a lot longer than I was. I was surprised...what I put it down to is the fact that I had blood given to me on the operating table....I think that sort of really helped me, strengthened me, you know, to pick up very quickly.
>
> (P.S., Anglo-Australian female)

The largest group of patients, however, did consider their experience to have been worse than they had expected. Five of the six Yugoslavs in this group mentioned pain and suffering as the reason for such an evaluation, as did 10 of the 12 Anglo-Australians. For one of the latter the experience was much worse than expected, even allowing for his previous operations:

> No, it wasn't what I expected. I didn't think it would be...so much, you know...uncomfortable and painful as it was....All the operations I've had before, of course, have never been anything like that, and I just didn't expect it to be that bad. Now that I know, well, I wouldn't want to do it again.
>
> (H.T., Anglo-Australian male)

Other patients were more specific in their comments, suggesting certain experiences or events as the factors influencing their evaluation. One patient, for example, described what she had been through as a "vicious cycle" of vomiting, pain, administration of Pethidine, more vomiting, pain, etc., until her allergy to the narcotic was recognised and another one given in its place. The expectation of "a fairly trivial procedure" was not realized in this or other cases, and patients admitted to being upset by, and unprepared for, some of their experiences. In the following example, the patient was recalling the shock of post-operative vomiting which contributed to her pain:

> Oh, well, I can remember being quite confident about the operation and being quite sure that I was gonna feel all right almost immediately afterwards, and be up and about the next day. And that just didn't quite work out. I was quite surprised and upset that it didn't... well, I am not normally a sick person, I am

> usually just fine, and to suddenly discover that something you thought that was gonna be very simple can make you sick,...quite a shock...when I really didn't feel very good, everything sort of would get foggy, foggy. I can remember feeling sick and feeling the pain...
>
> (M.P., Anglo-Australian female)

Patients who mentioned pain talked particularly about the first two or three days after surgery, recollecting the pain from the incision, as well as other types of pain - "burning indigestion", "gas" or "wind" pain, and pain caused by intravenous infusions and, in one case, intramuscular injections of antibiotics. In most cases, they gave indications of being insufficiently informed or prepared pre-operatively. For example:

> The doctor told me it was going to be like a caesarean....But the wind and everything was more than what I expected it to be, I just said one morning I thought I was having a heart attack, it was so severe...
>
> (C.D., Anglo-Australian female)

> It, it was different. Like, I don't know. I just think I was going to be more sore where the operation is done, but I was more sore on the other side. You know, I couldn't...I was in pain, probably because...wind inside me. I was bloated and everything else, absolutely terrible. Especially with the drips in the arm for three days. I just couldn't believe it...that all this could be because of an appendix...
>
> (K.B., Yugoslav female)

Patients who did not mention pain commented on factors such as lack of sleep, development of complications which resulted in a slow and protracted recovery, and a negative outcome of surgery.

In summary, only one quarter of the patients felt that their experience of hospitalization and surgery was very close to what they had expected pre-operatively. More Yugoslav patients mentioned that they had expected pain and were not surprised to have it post-operatively. Anglo-Australian patients tended to give other reasons for their evaluation. Only a small number of patients believed that the experience was better than expected, with three of the five in

this group stating that the pain was either less severe or less prolonged than they had expected. Over one half of the patients, however, suggested that their experience was worse than expected. The majority of this group mentioned pain as either the primary or contributing factor for their evaluation. As well as the incisional pain, they also mentioned pain associated with abdominal distension, intravenous infusions, and intramuscular injections. There were no appreciable differences between the Anglo-Australians and Yugoslavs in terms of either the number who found the experience worse than expected, or the number who mentioned pain as a reason for the disparity between the expectations and the actual experience.

POSITIVE AND NEGATIVE ASPECTS OF THE EXPERIENCE

The final question to which this study addresses itself is as follows:

What do patients perceive as the most positive and the most negative aspects of their experience of hospitalization and surgery, and does pain or its alleviation feature among these?

At the beginning of the final interview all patients were asked several broad and non-directive questions[1] aimed at eliciting comments about those aspects of their experience which they remembered most vividly or which they considered the most positive or negative aspects of the total experience. In relation to what was considered the best or most positive aspect, there were no appreciable differences between the Anglo-Australian and Yugoslav patients (see Figs 7.7, 7.8, and 7.9). Comments in relation to the positive outcome of their surgery and particularly the pathology reports which indicated that there was no malignancy, were made by eight Anglo-Australians and six Yugoslavs. Most patients said they experienced a sense of relief after they were informed of the success of the surgery, and some indicated that such information helped to make the rest of the hospital stay easier to bear. For example:

---

[1] Typical questions were:

- Looking back over the whole experience, is there anything that stands out as particularly significant for you?
- What was the best thing about the whole experience of having an operation and going through the discomfort?
- What was the worst thing about the whole experience?

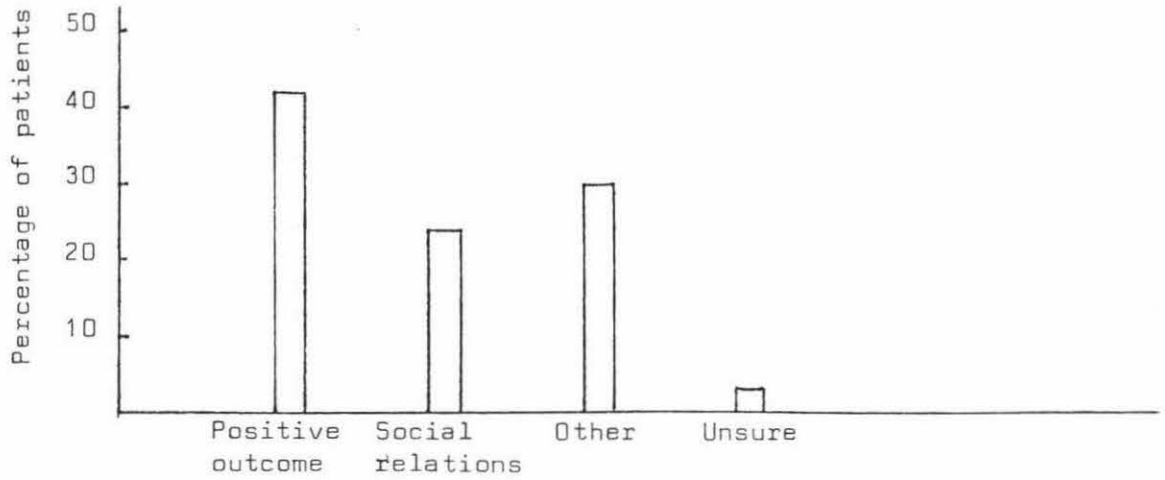

Fig 7.7 Percentage distribution of patients according to the most positive aspect of the experience (total group)

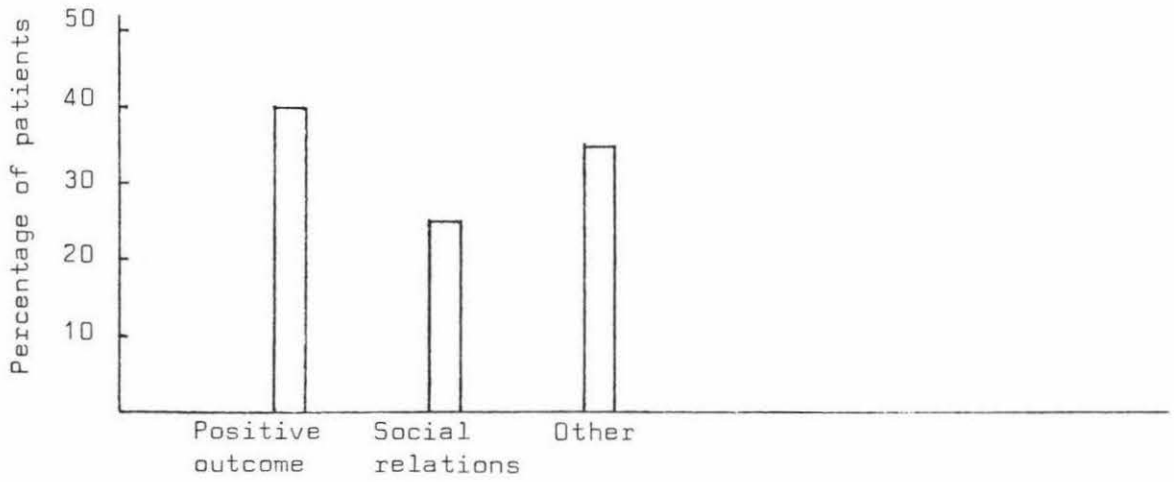

Fig 7.8 Percentage distribution of Anglo-Australian patients according to the most positive aspect of the experience

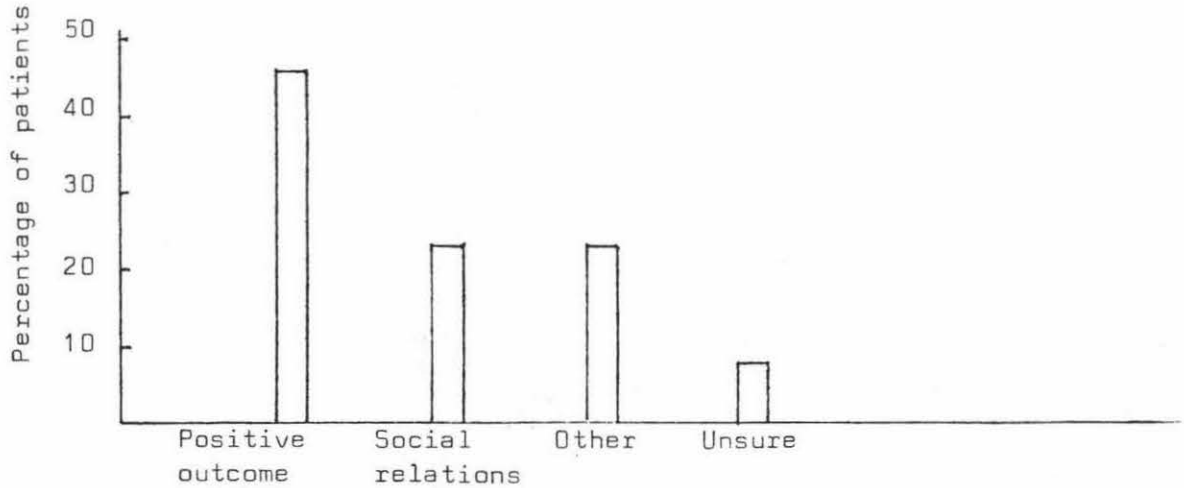

Fig 7.9 Percentage distribution of Yugoslav patients according to the most positive aspect of the experience

Researcher: ...what was the best thing about the whole experience?

Patient: Well, for me it was the outcome, which was quite successful, I believe. I don't know how I could have gone through the last week if I had been told the operation wasn't successful, because...I've had quite nice people in beds next to me, they've been cheery company, but it hasn't been pleasant being in hospital at all. It's very lonely really....So the most pleasant thing was the fact of the outcome, but as I said, I don't know how I would have coped had it not, had I not had some success with the operation.

(G.F., Anglo-Australian female)

The best thing of all was when I knew that I did not have cancer....when the doctor did the operation and told me 'It's quite certain that you haven't got cancer.' That was a relief, because my greatest fear was that I did, so after I got the encouragement it was easier then.

(I.L., Yugoslav female)

While only one (Yugoslav) patient mentioned the alleviation of pain in the post-operative period as the most positive aspect of the experience, two others (one Yugoslav and one Anglo-Australian) mentioned the long term prospect of being free from pain as the result of successful surgery.

The quality of social relationships they were able to develop with staff, fellow patients, or the researcher, was perceived as the most positive aspect of their experience by five Anglo-Australian and three Yugoslav patients.

I think I was telling you before, how scared I was going under the anaesthetic, and losing control...one of the nurses...I was put on a table and then I went under, and one of the nurses came up and, one hand was stretched out for the anaesthetic, and she came up and put the other hand here (across the chest) and held it, so I just felt so relieved, you know, that I actually had contact with a human being while I was sort of disappearing into oblivion. That really stands out, because that's nice. You try and forget the bad things, the Pethidine allergy, and the excruciating pain, and the vomiting with it, and the wound....The best thing was getting over that fear of going under I think, well, it sort of all focuses on that. But the other thing is that the room-mate has

> been an unusually nice person, very nice to talk to, interesting to talk to...and you!
>
> (J.B., Anglo-Australian female)

While two Yugoslav patients stated that they were unsure about what may have been the best aspect of the whole experience, seven Anglo-Australians and three Yugoslavs provided a variety of comments, ranging from "being told I could go home tomorrow" to "being able to rest and be waited on." One patient said that she was glad that her appendix was "bad" since she had had previous hospital admissions with abdominal pain and was discharged without surgery, so that she felt that the staff were regarding her as a malingerer.

As the preceding discussion has indicated, the majority of patients did not mention pain or its alleviation when talking about the most positive aspect of the experience. When discussing the most negative aspect of the experience, however, most (Anglo-Australians and Yugoslavs) mentioned pain (see Figs 7.10, 7.11, and 7.12). In fact, 14 of the 20 Anglo-Australian patients and eight of the 13 Yugoslav patients stated that pain alone, or in combination with other unpleasant experiences, such as vomiting, was the worst aspect of the whole experience.

> Researcher: What was the worst thing...?
>
> Patient: The pain, I think...being sick must have been really bad that night, but I can't remember it, I mean I know I was, I was vomiting a lot and things like that...not being able to sleep, even though I had an injection, because I was so sore, and not being able to turn over...
>
> (P.G., Anglo-Australian female)

> The worst thing was when I woke up. I couldn't move and <u>it hurt</u>, the heat,...I didn't know anybody. The pain was indescribable...if you haven't experienced it, you just don't know.
>
> (Z.C., Yugoslav female)

At times, patients commented that activities such as getting in and out of bed, coughing, or trying to use a bed pan were the worst aspects since they caused severe pain, particularly during the early post-operative period.

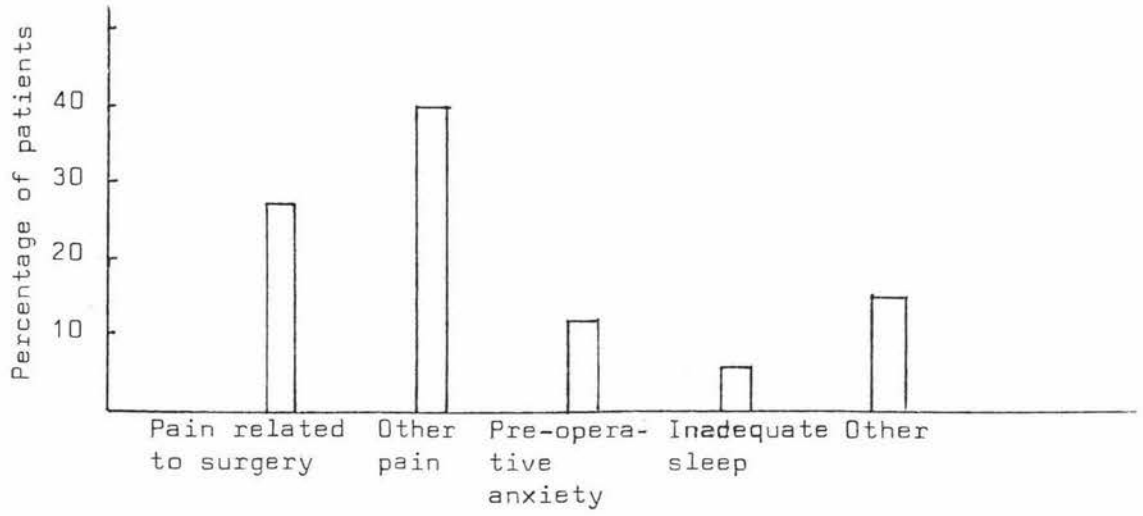

Fig 7.10 Percentage distribution of patients according to the most negative aspect of the experience (total group)

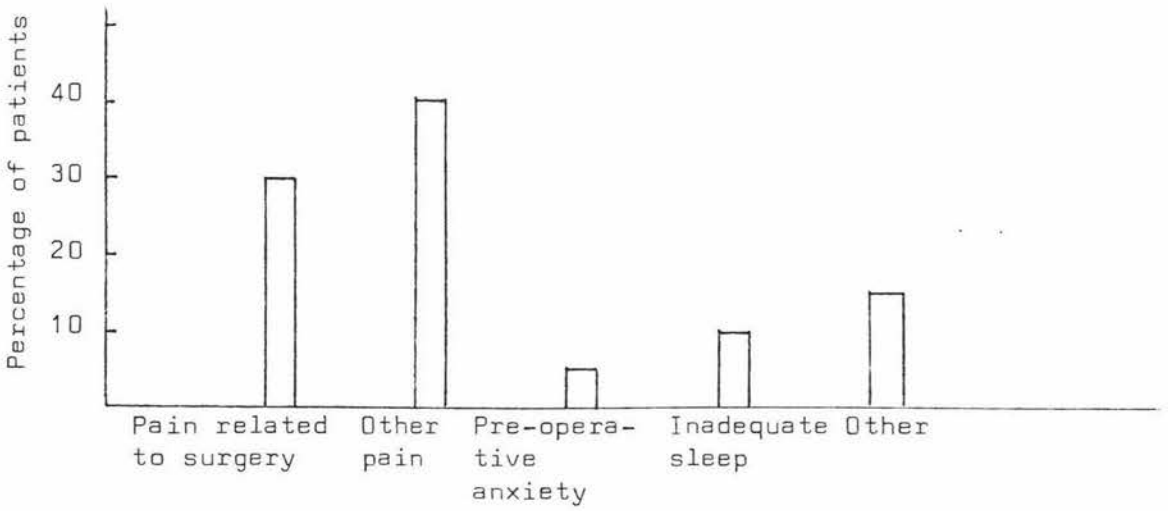

Fig 7.11 Percentage distribution of Anglo-Australian patients according to the most negative aspect of the experience

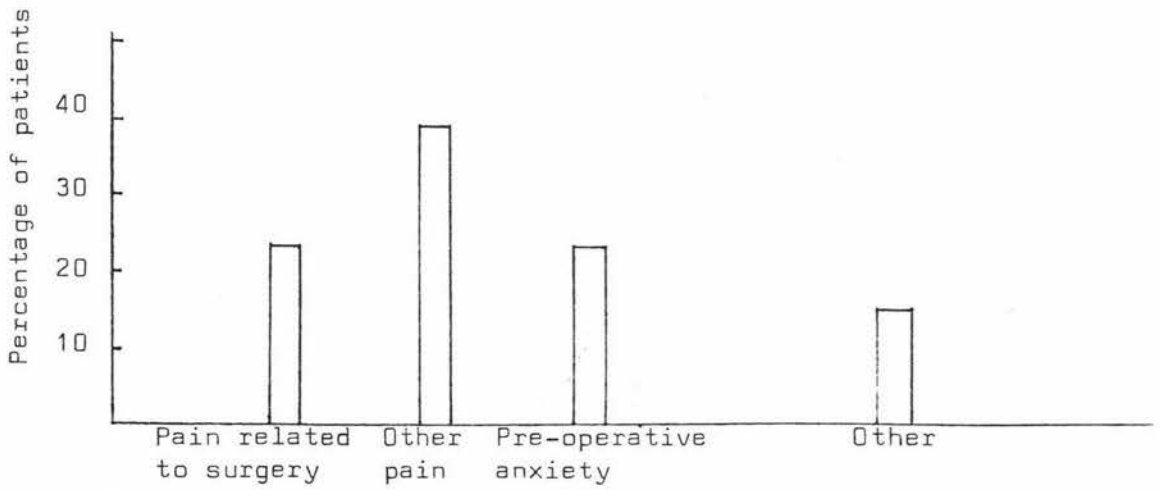

Fig 7.12 Percentage distribution of Yugoslav patients according to the most negative aspect of the experience

> I think the worst thing was when I started wanting a pan every twenty minutes when I was on the drip. See, I was on the drip for two days, and all I wanted to do was just use the pan. It was shocking, because my bladder would fill so quickly and it was pushing on where I was cut and causing pain, you know, and that was the worst thing I think.
>
> (A.R., Anglo-Australian female)

But as well as the pain associated with the surgical wound and aggravated by movement or other factors, patients stated that pain inflicted by injections, intravenous infusions, or naso-gastric tubes was the worst aspect of the experience:

> Oh, everybody was saying 'It's nothing, it's nothing'. I think the main thing was the injections (antibiotics) and the drip...Pain, mainly from the injections and having the drip on for so long. I think it was sort of, it was making me more uptight than anything else.
>
> (A.T., Anglo-Australian female)

Among other factors, patients also mentioned pre-operative anxiety, (particularly in three cases where surgery had to be postponed for several hours because of emergency admissions), inadequate sleep, a suffocating feeling on waking up from the anaesthetic, and having "an ugly scar".

Thus, it can be seen that alleviation of pain, or its absence, were seldom mentioned in relation to what patients considered to have been the most positive aspect of the experience of hospitalization and surgery. Rather, patients mentioned the positive outcome of surgery and the quality of human relationships they were able to develop with others. When discussing the most negative aspect of the whole experience, however, 70 percent of the Anglo-Australians and 62 percent of the Yugoslavs mentioned pain. As well as the pain related to the surgical incision, patients mentioned pain which resulted from intra-muscular injections, intravenous infusions, and tubes and catheters. There were no appreciable differences between Anglo-Australian and Yugoslav patients with respect to what they considered the most negative or the most positive aspects of the experience of being hospitalized and having surgery.

SUMMARY

Just as post-operative pain is experienced against a dynamic background of recovery from anaesthesia, medication, results of surgery, and general feelings of well being, so the anticipation of pain is only a part of the pre-operative experience. Thus, while just over one half of the patients admitted that they expected some post-operative pain, only a few admitted specific fears or concerns related to anticipated pain. Perhaps of greater significance is the fact that almost one half of the patients stated that they either did not know what to expect, or felt sure that they would not have post-operative pain. The significance of this is seen when related to the fact that among those who reported their experience as worse than expected, the majority considered pain to have been an important factor. It was even more important for those patients who had unrealistic expectations concerning the amount of pain they would experience.

The findings also reveal that pain is a very important issue for surgical patients, one which they tend to regard in a negative light. Almost 70 percent thought of pain as the most negative aspect of their experience, mentioning not only the pain of incision and surgery but also other types, notably inflicted pain.

Chapter 8

CONCLUSIONS AND IMPLICATIONS OF THE STUDY

The aim of this study has been to examine the experience of pain, following abdominal surgery, in patients from two culturally distinct groups. In this chapter the material is presented in three sections:

(1) Conclusions
(2) Implications for clinical practice
(3) Implications for further research

For the most part, statements made refer to the whole study group. However, where there are important differences between the Anglo-Australians and Yugoslavs, separate statements are made. The conclusions are presented as statements designed to answer the questions posed during the study. They are, at the same time, statements of hypotheses which have emerged from the study and which could form a basis for further research. The more specific implications of these findings for further research are discussed in the final section of this chapter.

CONCLUSIONS

The conclusions are presented in four sections: (a) the experience of pain; (b) the relief of pain; (c) the prospective and retrospective evaluation of the experience; and finally (d) a section devoted to some general conclusions.

The Experience of Pain

1.1 The experience of pain in surgical patients is influenced not only by the intensity of pain, but also by the patient's unpreparedness for the pain, inadequate analgesia, post-operative vomiting, and inadequate sleep.

1.2 Post-operative pain tends to change in both quality and intensity within a few days of surgery, but some pain can still be expected at least until the patient's discharge from hospital.

1.3 Generally, surgical patients do not expect to experience pain other than that related to the wound and surgery. Pain arising from other sources is not infrequent, however, and can be as severe (or more severe) than the pain of surgery.

1.4 Surgical patients experience pain as unpleasant and conceptualize it as resulting from tissue damage, comparing it to some form of injury. For those assessing the patient's pain, such comparisons can provide a clearer indication of the extent of the patient's suffering than simple statements of pain intensity (e.g. terms such as 'moderate' or 'severe').

1.5 Anglo-Australians appear to have a well developed vocabulary with which to describe the quality and intensity of pain. Their use of mainly sensory terms may be an outcome of specific role playing - namely, a reflection of "good patient" behaviour which is designed to aid hospital staff in the assessment and diagnosis of the patient's pain.

1.6 Yugoslavs appear to have a more restricted vocabulary related to pain. Their use of predominantly evaluative terms in describing pain may reflect their desire to share the experience with others (notably with respect to the subjective meaning of the experience for the patient).

1.7 People in pain engage in a variety of behaviours, none of which are specific to pain, and some of which are quite subtle, and hence difficult to detect. Facial tenseness and maintenance of a rigid posture appear to be the most common and the most persistent non-verbal indicators of pain in patients following abdominal surgery. Verbal self report remains an essential indicator of the pain's intensity, as well as its other properties, but needs to be elicited from the patient.

1.8 Patients experiencing pain do not always report their pain to hospital staff, and many will not ask for help (or will delay asking) even when in severe pain.

1.9 Anglo-Australians have a greater tendency to hide their pain and to present themselves as well groomed and independent.

1.10 Yugoslavs show little desire to hide their pain and will openly talk about pain as a means of coping with it. At the same time, they are less concerned with outward appearance and independence.

The Relief of Pain

2.1 The desire of patients for analgesic medication is motivated primarily by their subjective evaluation of the severity of pain, and patients are generally not concerned with either the possible side effects of drugs or the timing in relation to the last dose of medication.

2.2 The ready acceptance of hospital staff decisions in relation to the frequency of administration of analgesic drugs reflects the patients' lack of information about such drugs and their role in the management of pain.

2.3 For the Yugoslavs, bearing some pain without the use of drugs appears to have its own intrinsic value.

2.4 Intramuscular injections of narcotics are perceived to be effective in the reduction or elimination of severe post-operative pain, but their overall effectiveness in pain control may be severely compromised if the intervals between individual doses are longer than three to four hours (see Chapter 6, pages 156-157, and page 162).

2.5 Milder (oral) analgesics are perceived as being effective in the treatment of milder pain, but ineffective in the control of what patients perceive as severe pain (see Chapter 6, pages 159 and 163).

2.6 Reduction (or avoidance) of body movement is perceived and used by patients as a helpful measure to cope with pain. With this exception, few patients perceive measures other than analgesic drugs as helpful in the relief of pain or discomfort.

2.7 Anglo-Australians exhibit a greater preference for being alone when in pain, mainly because in the presence of others they feel an obligation to remain alert and to engage in conversation.

2.8 Yugoslavs show a greater preference for having others, particularly family members, with them when in pain. They appear to derive emotional support from others and feel less obliged to make an effort to appear sociable.

2.9 Patients in pain want to have nurses within easy call, to be prompt in providing help, and to be sympathetic towards individual patients.

Prospective and Retrospective Evaluations

3.1 In the pre-operative period, many patients may be either not aware of or not prepared to accept the possibility of post-operative pain. Most patients will not verbalize their fear of pain, but may admit to it later.

3.2 Patients who report their experience of surgery and hospitalization as having been better than expected, attribute it mainly to pain being less severe or lasting for a shorter time than expected.

3.3 Patients who report their experience of surgery and hospitalization as having been worse than expected, attribute it mainly to pain or to events (such as vomiting) which increase the pain.

3.4 Alleviation of pain does not feature as an important factor in what patients retrospectively evaluate as the most positive aspects of their experience of surgery and hospitalization.

3.5 Wound-related or other types of pain feature as the main factor in what patients retrospectively evaluate as the most negative aspects of their experience of surgery and hospitalization.

General Conclusions

The general hypothesis developed during the study was that while some behavioural differences exist between the Anglo-Australian and Yugoslav patients, the greatest degree of difference between the two groups is found in their underlying attitudes to pain.

The findings of the study support this hypothesis. The evidence shows considerable similarity between the two groups in terms of observable behaviours. In particular, the stereotype of the emotionally demonstrative "Mediterranean type" did not hold for the Yugoslavs in the study. They did not cry, scream, moan, or complain to any extent greater than the Anglo-Australians. Patients from both groups preferred to remain still when in pain, disliked being disturbed in order to receive certain treatments, and found the experience of pain worse than they had expected it to be. They also appreciated personnel who communicated caring and sympathetic attitudes and who helped them to retain a sense of trust and confidence.

Behavioural differences between the two groups were particularly apparent in relation to the extent to which they allowed their suffering to be known to others. Thus, while the Yugoslavs tended to openly acknowledge their pain by talking about it, the Anglo-Australians tended to make more indirect complaints about pain, or attempted to suppress or hide the manifestations of pain. The clearest demonstration of this was in relation to whether they wished to suffer alone, or to share their experience with others.

The greater stress on the values of individualism and independence

among the Anglo-Australians, could be seen as a reason for the desire of these patients to be alone when in pain, to be left to cope on their own, and to return to the company of others only after regaining control of their emotions and their behaviours. By contrast, the desire to have others with them when in pain may reflect the Yugoslav's general concern for family and communal involvement in life's crises and important events. Both joys and sorrows are shared. It may also reflect the patient's need for reassurance and support in a setting which is perceived as strange and threatening.[1] Thus the underlying attitudes to pain, and cultural prescriptions of what constitutes permissible and appropriate behaviour, played an important part in shaping the actions of people in pain.

The evidence in this study leads to the conclusion that there are differences in attitude between Anglo-Australians and Yugoslavs. It is suggested that the response of the Anglo-Australian patients to pain revolves around the concept of "good patient" behaviour. Such behaviour is exemplified by: cooperativeness with staff; efforts made to appear to be progressing well during the doctor's visits; compliance with prescribed treatments (even when these are painful or unpleasant); and expressions of confidence in the staff (particularly doctors). Like the 'old Americans' in Zborowski's (1969) study, the Anglo-Australians tried not to be overdemonstrative in their behaviour, tending to deemphasize (play down) their pain. Similarly, their reports of pain and requests for help tended to be unemotional, and when required they were able to describe their pain with precision. This does not mean that the Anglo-Australians did not complain, cry, or moan - simply that they tried to hide such behaviour and were selective in terms of the persons to whom such behaviours were directed. While they complained to the researcher, for example, and admitted to "whinging" to family members on occasions, there was a pronounced tendency to suppress such behaviours in the presence of others (notably hospital staff).

It is suggested that the response of Yugoslav patients to pain revolves around the concept of "trpljenje" - a Serbo-Croat term closely related to the Russian word "tyerpyenye", which can be translated as

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[1] It was particularly noticeable that the expressions of such reassurance and support were almost invariably expressed directly, i.e. through personal visits, rather than indirect messages such as flowers or get-well cards.

"suffering", but primarily means "patience" and "power to resist". For these patients enduring pain was an active struggle which required energy and fortitude. While the attitude suggests a degree of stoicism, in the sense that one is asked to show great power to resist pain, it does not imply the suppression of emotions contained in the original meaning of the term. While the patient was the one who had to suffer the pain and bear it, he could also legitimately call on others to share in his suffering so that there was little need to hide the pain. This attitude helps to explain the behaviour of those patients who talked about their pain, reported it as severe, and expressed a desire to have others with them, but at the same time rejected offers of analgesic drugs after the first one or two days post-operatively. The need to patiently endure pain until it "left the body" as the result of natural forces, was preferred to a situation in which pain was "smothered" by drugs and remained inside the body.

The above interpretation should not be taken to suggest that all Yugoslavs demonstrated the same attitude to pain. Some in fact responded in an almost opposite way, by stating that they did not consider it necessary to suffer if there were drugs or other measures available to relieve the pain. Nevertheless, whether accepted or rejected, the concept of enduring and winning over pain provided the orientation for the patients' behaviour. (At the same time, Yugoslavs did not express any concerns with whether or not they were being "good patients"). On a broader scale, this orientation to pain may be seen to reflect their more general attitude to life which is perceived as hard and full of suffering.

In terms of their readiness to show pain, the Yugoslavs in this study can be compared with the Jewish and Italian patients in Zborowski's study. It would, however, be misleading to place these three cultural groups in the same category in relation to pain. While similar to these groups in some ways, the Yugoslavs can also be seen to resemble the Irish (as described by Zborowski), particularly in their readiness to accept suffering and in their descriptions of pain being more vague and less precise than those of the Anglo-Australians (or the "old Americans" in Zborowski's study).

The similarity between the Anglo-Australians (in this study) and

the "old Americans" (in Zborowski's study) may, at least in part, be due to their common Anglo-Saxon background. Another important factor may be that, like the "old Americans", Anglo-Australians received support and reinforcement for their style of behaviour from hospital staff who subscribed to the same cultural values and norms. The Yugoslavs, on the other hand, while different from Anglo-Australians, differ also from other groups described in the literature. It would seem to the researcher that Yugoslavs may need to be considered within the broader context of Slavic cultures which thus far have been overlooked or neglected in social science research.

IMPLICATIONS FOR CLINICAL PRACTICE

The implications discussed here refer specifically to the management of pain in surgical patients. For the most part, these implications have particular significance for nursing practice, but may also be relevant to other professionals involved in the care of people in pain. The comments which follow are offered not as criticisms of existing practices in any of the hospitals involved in the study, but rather as pointers towards greater involvement of nurses in the treatment, evaluation and control of pain. It is believed by the researcher that greater nursing involvement in the management of pain can lead to better patient care and a subsequent reduction in suffering on the part of those who undergo surgery or other types of treatment. The discussion is presented in four parts, dealing with the questions of pre-operative preparation, assessment of pain, management of pain, and evaluation of pain-relieving measures.

Pre-Operative Preparation

In order to help patients gain more realistic expectations of post-operative recovery, it is advisable to prepare them for the experience of pain which they are likely to encounter. It does not seem appropriate to help patients deny their fears or expectations of pain during the pre-operative period, when they are almost certain to experience some pain in the post-operative period. It would seem more appropriate to prepare them for the type, location, and duration of pain they are likely to experience, and to familiarise them with the measures available for the management of pain. In particular, patients undergoing

abdominal surgery need to have some warning of "wind" pain, and ways of dealing with this type of pain. The stress, however, needs to be on the measures which staff members can use in the relief of pain, including administration of analgesic drugs, and ways in which patients themselves can obtain relief from pain.

Such preparation needs to be an integral part of pre-operative teaching, on a par with instructions in deep breathing and limb exercises. Pre-operative discussion of pain can also provide nurses with information about the patient's previous experiences of pain, his/her ability to tolerate pain, and attitudes towards pain and pain-relieving drugs. With this information at her/his disposal, the nurse could more effectively provide the comfort and relief from pain that patients expect.

Assessment of Pain

Patients experience pain as individuals, but also as members of particular cultural groups. It is important, therefore, that when assessing pain, nurses should take note not only of the medical diagnosis, but also individual and cultural differences. Since patients will not necessarily report their pain, or ask for help, the responsibility for determining whether or not a patient is in pain and what type of help (if any) is required must rest with those members of the health team who spend most time at the patient's bedside - the nurses. Since pain cannot be observed or measured directly, nurses must make inferences about pain and suffering. It is important, therefore, that all available sources of information are utilized in the process of pain assessment.

Behavioural responses can serve as one source of information. However, since none of the behavioural responses are specific to pain, and some patients will suppress or hide some of the more obvious manifestations of pain, it is important to note any behaviours which may indicate pain and to verify inferences made. Verification should include evaluation of the patient's verbal reports, as well as (among other factors) information about the time interval since the last dose of analgesic medication.

In relation to verbal communication, even when the patient and

the care giver speak the same language, there is a potential for misunderstanding. The person in pain may have difficulty finding words which adequately describe his/her experience, while the staff may be selective in their perception, hearing only those messages which are consonant with their perception of themselves as competent care-givers. A simple statement of "no pain" does not exclude the possibility that the person is sore, hurting, or aching. When there is a language barrier, however, as was the case with most Yugoslavs in the study, the potential for inadequate communication is multiplied. It would be particularly unwise to assume that lack of complaints from such patients was indicative of freedom from pain. Neither is it helpful to assume that the word 'pain', when used by a person of Yugoslav background, carries the same meaning in relation to pain intensity as when used by an Anglo-Australian.

If one aim of nursing care is to relieve suffering, then nurses must find ways of adequately assessing the patient's pain and need for relief, even when communication barriers exist. While such means or instruments would clearly need to be evaluated through research, it is possible that bilingual versions of a visual analogue scale or a check list of pain descriptors could be developed and used as an aid in pain assessment.

Management of Pain

The findings of this study strongly suggest that patients recovering from surgery can experience considerable pain. All the patients in the study had written orders for specific analgesic medication, yet in spite of this many suffered severe pain. This experience of pain was, at least in part, due to the fact that such medication was given at intervals which were longer than the four hours usually specified in the written orders (see Chapter 6, pages 156,157 and 162).[1] It seems appropriate, therefore, to stress that nurses - largely responsible for the administration of drugs - need to give greater attention to the problems of pain management, particularly in the early days of post-operative recovery.

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[1] It is worth noting that on the first post-operative day (when the maximum number of doses of narcotics for most patients was set at six) the highest number of doses received by any one patient was five (in three cases), while the average was 2.75 doses.

The findings of the study also suggest that individual doses of narcotics given intramuscularly provide effective pain relief for no longer than 2-3 hours. Thus the traditional medical prescription of a narcotic ("4-6 hourly, IM, PRN") may also require reexamination. Attempts to introduce continuous intravenous infusions of narcotics during the early post-operative period (discussed earlier; see Chapter 2, page 19) deserve serious consideration.

Whatever the means of drug administration, however, it appears that nurses need to take on a more definite responsibility for the provision of adequate analgesia for patients under their care. It may be that in the same way in which nurses are accountable for the patient's hygiene needs, they need to see themselves accountable for the patient's comfort and relief of pain. The fact that patients, in spite of pain, unquestioningly accept staff decisions about the frequency of analgesic medication, only serves to underline the responsibility of nurses for adequate analgesia.

However, not all pain requires pharmacological intervention, nor indeed do all patients requesting help always want analgesic drugs. Some patients, particularly Yugoslavs in this study, simply wanted others to sympathise with them, and to understand their reluctance to engage in activities likely to increase their pain. On the other hand, patients seemed unaware of the many practical measures such as positioning, relaxation, or supports (in the form of pillows) which could reduce their discomfort and pain. There would seem, therefore, to be considerable scope for the development and use of nursing measures which, when coupled with positive suggestion, have been found to be effective in helping patients cope with pain.

There are also other less specific measures, which can be helpful to people in pain. Both the Anglo-Australians and the Yugoslavs stressed the positive value of supportive relationships with staff. They wanted to be listened to with interest, provided with explanations, and treated with sympathy and understanding. It would seem appropriate, therefore, to stress the need for nurses to develop therapeutic relationships with their patients. Such relationships are characterised by mutual trust and rapport, and can be developed by professional nurses with adequate training in inter-personal skills. From this perspective,

the reliance on student nurses to provide basic nursing care, and hence the rapid turnover of ward staff (see Chapter 3, page 64, and Chapter 5, page 141), is open to question and may need to be re-examined. The point being made, of course, is that this aspect of staff organization may mitigate against provision of adequate psycho-social support to patients in pain, as well as adequate assessment and management of patients with pain.

Evaluation of Pain-Relieving Measures

It was found that some patients experienced adverse effects from the narcotics they received - effects which were not diagnosed for more than 24 hours as due to the action of drugs. Other patients received only mild analgesics in the early post-operative period, at a time when they felt that such drugs provided insufficient relief from pain. Yet other patients reported periods of distressing pain during the intervals between doses of medication which, while otherwise effective, nevertheless did not last for a long enough period of time. Such findings point to a definite need for evaluation of measures employed in the relief of pain.

The assumption that, once given, analgesic medication will provide adequate relief from pain is not a sufficient basis for nursing action. Apart from the fact that the dosage may be insufficient (or excessive), and the side effects unpleasant or even distressing, the person in pain may need intervention other than medication. Evaluation of pain relief measures may point to the need for change in prescribed medication, additional explanation, reassurance, or physical help. Hopefully, such evaluation would ensure that the most appropriate intervention was provided.

Given the fact that the pain experienced by patients may emanate from sources other than surgery, attention should also be directed toward the evaluation of such additional pain, as well as its effects on the patient, and the effectiveness of measures used to deal with it. While some types of pain are clearly preventable (e.g. interstitial seepage of intravenous fluids), or can be treated promptly, others may need a different type of intervention (e.g. a relaxing massage for a person with backache). Whatever the most appropriate measure for dealing with different types of pain, the findings of this study suggest that such pain needs to be taken seriously and given the same careful attention as pain associated with the wound and surgery.

It would also seem appropriate to evaluate the effects of visitors on the patient's ability to cope with pain. An offer to restrict visitors for those patients who prefer to be alone when in pain may be helpful. On the other hand, a relative or friend may need to be called in for a patient who expresses a desire for company and is unsettled when left alone. Particular attention should be paid to those patients who express a strong need for company, but have no visitors, or are visited only infrequently. Yugoslavs who have no family, or whose families are unable to visit, would seem to be prime candidates for particular attention and additional support from staff.

Summary of implications for clinical practice

The study findings point to two broad implications for clinical practice.

First, there is a need for better nursing management of patients with pain so that unnecessary pain is prevented, and unavoidable pain is treated appropriately and promptly. It is important, therefore, that nurses assume greater responsibility for the continuing assessment, treatment, and evaluation of pain and pain-relieving measures for individual patients. It is also important that nurses should see themselves as accountable for the quality of pain management they provide.

Second, there is a need for all staff to be aware of the cultural differences and similarities that exist among patients, and their implications for the behaviour of people in pain. Neither stereotypes of cultural groups, nor the egalitarian treatment of all patients as if their needs were identical, are conducive to optimal patient care and the concern for the total person professed by nurses.

IMPLICATIONS FOR FURTHER RESEARCH

The phenomenological approach used in this study has made the researcher more aware of the many complex issues involved in the experience and management of pain. The cross-cultural nature of the study has also pointed to areas where new and additional research is needed. The study has also highlighted the need for better understanding of the nursing contribution to the management of pain. The comments

which follow are, therefore, organized under three headings: implications for further study of pain; implications for cross-cultural research; and implications for research in the area of nursing management of pain.

Implications for Further Study of Pain

Recognition of the fact that we do not know enough about "natural" pain trajectories, as well as the fact that post-operative pain is not always managed adequately (supported by the findings of this study), point to the need for further research into pain in the clinical setting. In particular, we need to know more about pain assessment and the use of effective means of assessment based upon communication between those experiencing pain and the care-providers. We also need to know much more about the knowledge base from which health personnel make judgements about the extent of a patient's suffering, and the information that health personnel use in determining the prescription and use of specific pain-relieving measures.

Since we do not know enough about the responses of people in terms of an ongoing experience of pain, there seems to be a need for detailed and carefully documented case studies of patients with both typical and atypical pain trajectories following the same type of surgery. In particular, we need to know if either felt or expressed needs of patients for specific types of intervention can be predicted so that pain is minimised or (where possible) prevented.

In addition, there is a need for greater knowledge about the risks associated with the use of common analgesic drugs as well as their effectiveness. For example, what are the true risks of addiction to narcotics for patients receiving such drugs for acute post-operative pain? More specifically, would provision of such medication for a period of five days (rather than the typical 2-3 days) increase the risks of addiction, or other adverse effects, for the patients? Such information would clearly provide a more certain knowledge base for clinical action.

While expensive in terms of human resources, the participant-observation approach used in this study appears to offer important advantages for clinical research into pain. Since the impressions, recollections, and feelings of patients about pain change over time, the

participant-observation approach allows the researcher to verify or question data obtained through periodic interviews or retrospective questioning. It also allows the researcher to study people in pain in terms of their total experience (which, after all, is what those in clinical practice have to deal with) rather than only restricted facets of the experience.

Implications for Cross-Cultural Research

A single, small-scale study can make only a limited contribution to an understanding of how people of Anglo-Australian and Yugoslav backgrounds cope with and respond to their experience of pain. Further research with these cultural groups is necessary, not only in relation to post-operative pain, but also other types of acute and chronic pain. In order to control for the variable of migration it would be particularly worthwhile to conduct studies with Yugoslavs in Yugoslavia and with Anglo-Australians in settings outside of Australia. The dearth of social science research concerning the experience of pain among people from Slavic cultures has already been mentioned.

On the other hand, the experience of this study confirms the observations of other researchers (e.g. Sechrest, 1977): namely, that both knowledge of the cultures one is entering, and appropriate language skills, are a definite advantage to a researcher engaged in cross-cultural studies. The ability to analyse and code raw data, prior to translation, is particularly important in terms of the availability of such data for immediate use and avoidance of unnecessary delays in the research process. While cross-cultural research has its additional problems, the experience of bridging gaps in cross-cultural communication can make it into a very rewarding activity.

Implications for Research in the area of Nursing Management of Pain

Surgical patients experiencing post-operative pain depend largely on nurses for an adequate relief of such pain. In particular, they are dependent on the nurses making accurate inferences about the significance of the pain, its intensity, and the patient's need for specific types of intervention. While some research has been done in this area over recent years (e.g. Davitz and Pendleton, 1969; Oberst, 1975) such studies have used written descriptions of people in pain, rather than direct observations of nurses in clinical situations, to examine factors which

influence inferences of suffering. Further work in this area is clearly needed. In turn, greater knowledge of how nurses form clinical judgements in relation to pain would help in determining what educational programmes are required, in order to provide nurses with adequate knowledge and skills in the area of pain management.

Just as the topic of death seemed (until recently) to be a taboo subject, so today the topic of pain seems to be avoided in patient-staff discussions, as if to talk openly about it would increase the patient's distress. While recent research has indicated that accurate information (about surgery and post-operative events) can reduce post-operative pain and anxiety (Hayward, 1975), there is little agreement in relation to how much of that information should deal with pain, what information should be given, when it should be given, and under what conditions.

In addition, we need to know more about the use of non-pharmacological measures in the management of pain. While measures such as positioning, relaxation, or distraction have all been found to relieve pain in certain situations, there is still a need to establish whether there are indicators which would provide some assurance that such measures would be effective in conjunction with, or as a substitute for, other forms of treatment. Furthermore, detailed studies of how patients respond to changes in the quality and intensity of post-operative pain could provide nurses with clearer indicators of when narcotics should be discontinued as the main means of pain relief and other measures substituted.

There is also a need for documentation and evaluation of innovative practices. For example, visual analogue scales of pain intensity have been widely used in clinical research, but it is not known how useful they would be as a routine assessment tool in clinical practice. It may be that subjective data about pain, obtained by means of a visual analogue scale at regular intervals, could be collected and recorded in a way similar to the patient's temperature or pulse. Records of drugs and other measures could be incorporated into such a profile of the patient's pain experience. Such innovations would, however, need to be evaluated in terms of cost and their impact on the management of patients in pain, and therefore the quality of care.

It seems that nurses not only need to become more active in the management of patients with pain, but also need to contribute more to research in this area. If one of our aims is to relieve pain and suffering, then we must find the most effective ways of achieving that aim. If this study stimulates others to undertake research in the area of pain, or makes those in clinical practice more aware of their role and responsibility in the management of people in pain, then from this writer's viewpoint the effort involved in this study will have been well worthwhile.

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Appendix 1

MASSEY UNIVERSITY

NURSING STUDIES UNIT

AUTHORIZATION FOR COLLECTION OF INFORMATION

Subject No. _____

I understand that the study, to be conducted by Irena Madjar, will involve:

a) several interviews during my stay in hospital;
b) daily visits by the investigator, and
c) referral to my hospital records.

I understand that the purpose of the study is to collect information about post-operative recovery, including information about sleep, pain, and general comfort.

I understand that all information obtained from me, or about me, is confidential and will be used only for study purposes.

I understand that some of the interviews will be tape recorded and that the tape will be erased immediately after the information has been reviewed by the investigator.

I understand that I am free to withdraw my consent and discontinue my participation in the study at any time.

I am willing to take part in the study.

Signed _____

Witness _____

Date _____

Appendix 1(a)

MASSEY UNIVERZITET

ODELENJE ZA BOLNICARSKE STUDIJE

DOZVOLA ZA ZBIRKU INFORMACIJA

Osobni Broj _____

Ja shvaćam da ovo istraživanje, koje Irena Mađar poduzima, obuhvaća:

a) nekoliko razgovora za vreme mojeg boravka u bolnici;
b) svakodnevne posete od strane istraživaća, i
c) pregled mojih bolničkih dokumenata.

Ja shvaćam da je razlog za ovu studiju zbirka informacija o oporavljanju nakon operacije, uključujući informacije o spavanju, bolu, i opštem osećanju.

Ja shvaćam da su sve ove informacije o meni poverljive prirode i da će biti upotrebljene jedino u vezi ove studije.

Ja shvaćam da će neki razgovori biti snimljeni na magnetofonsku traku i da će ta traka biti izbrisana čim su informacije sa nje pregledane.

Ja shvaćam da sam ja slobodan/slobodna, bilo kada, da povučem moju dozvolu i prestanem učestvovati u dalnjem istraživanju.

Ja pristajem da učestvujem u ovoj studiji.

Podpis _____

Svedok _____

Datum _____

Subject No: _____ Date: _____ Time: _____

Observation Checklist for BEHAVIOURAL RESPONSES:

Specific behaviours observed:			Comments:
Motor	restless moving about in bed/chair rigid posture restless walking facial tenseness	clenching teeth/ biting lip hand clenching skin (clammy, sweaty) other:	
Vocal	moaning groaning crying	screaming grunting other:	
Verbal	complaining talking about pain asking for help	cursing pleading other:	
Social	clinging behaviour changes in communic-ation changes in social manners	changes in personal appearance social withdrawal other:	
Absence of manifest behaviours	suppression or hiding of pain denial other:		

Appendix 3

SUBJECT NO: _____

DATE: _____

TIME: _____

(A) SLEEP

Slept Really Well	Moderate	Did Not Sleep At All

(B) COMFORT

Feel Very Comfortable	Moderate	Feel Very Uncomfortable

(C) PAIN

No Pain At All	Moderate	As Much Pain As I Could Stand

(D) APPETITE

Feel Like Eating a Good Meal	Moderate	Do Not Feel Like Eating At All

Appendix 3(a)

OSOBNI BROJ: _____

DATUM: _____

VREME DANA: _____

(A) SPAVANJE

Spavao/Spavala Sam Vrlo Dobro	Umereno	Nisam uopšte Spavao/Spavala

(B) OPĆE OSEĆANJE

Osećam Se Vrlo Udobno	Umereno	Osećam Se Vrlo Neudobno

(C) BOL

Uopšte Ne Boli	Umereni Bol	Boli Toliko Da Više Ne Bih Mogao/Mogla Podneti

(D) APETIT

Osećam Da Bih Se Mogao/Mogla Dobro Najesti	Umereno	Osećam Da Ne Bih Mogao/Mogla Ništa Jesti

Appendix 4

SUBJECT NO: _____

DATE: _____

TIME: _____

Verbal Self Report:

PAIN	Location Duration Intensity Other comments about pain:	Comments:
MORALE and other feelings	(responses to a question such as, "How do you feel in yourself, by that I mean, what sort of mood are you in?") (Kako se inace osecate? ili U kakvom ste raspolozenju?)	
Spontaneous (unsolicited) comments		

Appendix 5

SUBJECT NO: _____

DATE: _____

TIME: _____

Participant Observation Notes:	Comments, concepts, etc.

Technical Information:

Name:		Date of operation:
Type of operation: Duration:		Type of anaesthetic:
Sutures:	Date in:	Date out:
Catheter:		
Drains:		
N/G tube:		
Other:		

Analgesia:					
Day	IM/IV	Orally	No. of doses	Total amount	Morphine equivalence
0 1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
etc.					

Appendix 7

A List of Some Typical Questions Asked in the Final Interview

(1) What was the best thing about the whole experience of having an operation and going through the discomfort?

(2) Was it as you had expected it was going to be?

(3) What was the worst thing about the whole experience?

(4) How much pain overall would you say that you've had?

(5) When did you have the worst pain?

(6) What kind of pain was it? Did the pain change with time?

(7) Do you have any pain today?

(8) What helped to ease the pain in your case?

(9) Was there something that you or someone else could do to make you more comfortable or ease the pain?

(10) Would you say that you received about the right amount of injections and (or) tablets for pain, or perhaps too little, or too much?

(11) How important was it for you to have visitors? Did they usually make you feel better or worse?

(12) Did you want your family or someone else with you when you were in pain?

The order and wording of the above questions differed between interviews and frequently other questions designed to probe important issues were introduced.

Appendix 8

A List of Questions Compiled Prior to the Commencement of the Study

(1) What are patients' expectations in relation to post-operative pain?

(2) What are patients' expectations of their ability to cope with the experience of pain?

(3) What types of expectations, if any, do these patients have of the medical and nursing staff in relation to relief of pain?

(4) How do patients conceptualise their personal experience of pain? Do they relate their individual experience to that of other patients in similar circumstances?

(5) How do patients respond to pain? Are there any discernible patterns in their responses, and how do such patterns relate to other phenomena in the situation?

(6) What are the differences in the way patients think, feel, and respond to their pain experience, and can such differences be related to and explained on the basis of differing cultural backgrounds?

(7) What are the similarities between the two culturally different groups in their experience of pain?