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Professional Education, Ideology and Learning: A study of Student Nurses' Construing of Patients and Their Care.

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Thesis submitted in fulfilment of requirements for the degree Doctor of Philosophy

City University, London

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DECLARATION

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Mary Watts

ABSTRACT

The study outlined in this thesis stems from empirical work carried out with student nurses over a four year period. It reflects a constructivist theoretical perspective and integrates notions of shared representations, ideology and learning within the context of student nurses' construing of patients and their care.

The study was prompted by observations of curriculum change in nurse education and the framing of questions relating to the impact of this upon student nurses' construing.

The research methodology owes a lot to George Kelly's personal construct perspective and repertory grid techniques but has been broadened to take account of shared representations as manifest in patterns of shared constructions. The study also focuses upon what might appear to be inconsistent and potentially dilemmatic or paradoxical aspects of construing.

The study provides detailed information relating to the construing of student nurses who had studied an 'old' Registered General Nurse (RGN) curriculum, a 'new' RGN curriculum with an increased emphasis on the psychosocial aspects of nursing care, and students who had newly entered training and not commenced any programme.

Amongst other findings it was identified that all groups valued psychosocial aspects of care highly, although there was evidence of them feeling least well prepared in these areas. The 'new' curriculum students, however, appeared to be more aware of the disjuncture between theory and practice in relation to psychosocial aspects of care.

All groups demonstrated a 'blaming' attitude towards patients whose ill health they considered to be caused by their behaviour, there was, however, some indication of this being less prominent for the 'new' curriculum students.

The results of the study are discussed in relation to notions of social representation, ideological influences upon construing, the dilemmatic aspects of ideology, learning, and professional education. Issues relating to cognitive complexity and interpersonal communication are also discussed.

PREFACE

This study brings together literature and theoretical perspectives drawn primarily from social Psychology, Health Psychology, Nursing and Professional Education, as well as those derived from my own professional and academic experiences. These experiences have encouraged me to build bridges between what are frequently considered to be separate bodies of knowledge or disciplines. Boundaries, however, are artificial and experience cannot be neatly filed away into separate compartments.

The study was prompted by my observations of imminent major national changes in nurse education, and also a specific change occurring within the college of nursing to which I was attached as a lecturer in Behavioural Sciences. This prompted me to ask questions of a very general nature, the foremost being: will a change in curriculum impact on nurses' perceptions of patients and their care?

The question reflected less concern about curriculum outcome in terms of the formal knowledge base of students, than an interest in the more subtle domains of values, beliefs, and attitudes. The more general question was developed into the following more specific questions: what implicit assumptions about patients and their care do student nurses hold? Will there be aspects of

construing patients and their care that will hold true for nurses who have had similar but different curriculum experiences? What if any will be the relationship between the nurses' perceptions of patients and their care, the educational process, social, and ideological factors?

The superordinate questions or areas of concern related to how the information could be of benefit to the professional educator, and in particular those involved in nurse education. Nurse education is an area of particular interest in view of the very rapid changes occurring within it and the easy tendency to assume that planned change will both have some effect, and that this effect will be desirable.

My observations and broad questions relating to curriculum change, led to the undertaking of the study which is outlined in the remainder of this text. The study reflects both an interest in nurse education, and also in the broader theoretical and applied issues which the study has enabled me to address.

The study is innovative in that within a constructionist framework, which is elaborated in the following chapter, it integrates and develops a range of theoretical perspectives and research methodologies. These are then discussed in the light of the empirical findings and within the context of potential areas for further research.

It is hoped that the research methods used within the empirical parts of this study are sufficiently clearly set out and explained, both practically and theoretically, that those in the process of designing similar studies can adopt and adapt aspects of it which are relevant to their own research.

It is anticipated that amongst others, the study will be of interest to nurses, professional educators from a range of settings, psychologists with an involvement in health and related areas, and researchers in the field of implicit psychology.

CHAPTER 1

Introduction and Theoretical Perspective.

1.1, Introduction

The research study outlined in this text stems from empirical work carried out with student nurses, over a four year period. It integrates notions of shared representations and ideology within the context of student nurses' construing of patients and their care. It reflects a constructivist* theoretical perspective, which is discussed later in this chapter.

In broad terms the thesis is an attempt to identify the ways in which student nurses construed patients and their care, taking account of the impact of curriculum change upon this.

1.2, Theoretical perspective

The theoretical perspective which underpins the study is constructivist, that is to say, based on the notion that people are active meaning makers and construct a personal 'reality' in relation to internal and external experiences. 'The universe is seen as changing, knowledge

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* The term constructivist is used interchangeably with constructionist.

as constructed, and the ideal form of explanation as the understanding of organized complexities' (Vasco, 1994).

In reviewing the roots of modern constructivism, Vasco (1994) pointed out that the philosophical roots of constructivism go back to the 17th century (Mahoney, 1991), but it's influence in European Psychology became explicit in the 1930's through the work of Frederic Bartlett (1932) and Jean Piaget (1937). It developed in the United States after the publication of George Kelly's seminal work, *The Psychology of Personal Constructs*. George Kelly's ideas have made a significant contribution to the ideas contained within this study and are elaborated in chapter 4. However, the ideas within the study are not limited to a personal construct perspective. There is an interest in the interrelationship of personal construing, social constructions, and shared representations. The term 'social representation' is more commonly used in the literature, (Moscovici, 1984) but for reasons which will be expanded during this study, the term 'shared representations' is preferred by this author.

Literature relating to the ways in which health and illness are represented by individuals or groups has a lengthy history, and ranges from anthropological studies of largely non-western cultures, to experimental psychological studies. A number of examples of theoretical and empirical literature will be referred to

throughout this work. There is considerable diversity in terms of the theoretical underpinnings of work quoted, but the emphasis in this text will be on aspects of constructivist debate rather than the appropriateness of a constructivist perspective versus a positivist perspective.

Theory and debate - the Constructivist's Dilemmas

The essence of a constructivist perspective is that people create meaning from, or read meaning into, situations and events. It can be argued that meanings, once created, can take on an existence apparently independent of the person/people who created them in the first place, thus becoming 'reified' and taken for granted by others.

A warning is, therefore, appropriate at this stage. The study outlined in this text, and the 'stories' woven around it, reflect a plausible reality, but not reality itself. A number of meanings have been constructed which have been systematized and shared. Aspects of this meaning are already likely to be shared with others who have reached similar conclusions via other routes; other aspects may be new. One implication of this is that rather than ideas being accepted as 'true' meaning, there is scope for them to be actively thought about and reinterpreted by the reader.

A classic example of reification relates to the early anthropological studies of health and illness in which the focus was on 'primitive' cultures which were seen to be guided by mystical and magical dogmas. In contrast, civilized western cultures were seen as guided by empiricism and rational thought. (Rogers 1991, ch1)

Rogers (1991), suggested that this division has become increasingly unacceptable since the 'irrationality' of much of modern western medicine is now being recognized.

> 'What has distinguished more recent anthropology (see, for example, the work of Guess, 1984, and Kleinman, 1984) is its determination not to claim any superiority for Western thought. This has enabled contemporary anthropologists to recognize that beliefs in magic and religion and ritualistic behaviour abound in western culture. They are so familiar to us that we fail to recognize them ...' (Rogers, 1991, p16).

The point to be taken from this is that if a system can be understood from within, and accepted, rather than having its basic tenets questioned, then it is more likely to be seen as a rational and integrated system. 'Primitive' explanations of health and illness are rational within a world view based on magic, and western explanations are rational if we ignore the value and

belief components, and consequent hidden dilemmas, upon which they are based.

Western biomedicine is broadly seen as based upon 'scientific facts' but the belief components of the system are so familiar to us that we may fail to recognize them. The first dilemma, then, is that familiarity can 'numb our senses', or influence the constructions that we utilize in respect of any situation or event. We may accept without question the stories we have been told. The dilemma is how do we benefit from 'old wisdom' and the experience of others whilst remaining an active meaning maker?

This leads into the second dilemma, which relates to the degree that meanings are personally or socially constructed. Anthropologists such as Kleinman (1978, 1980) and Young (1982), referenced in Rogers (1991), drew attention to the individual cognitive aspects of explanations relating to health and illness, and also to the cultural influences impacting on an individual's 'model' of reality. The notion of reality being socially constructed has been much publicised (Berger and Luckmann, 1966) and will be returned to in chapter 3. Dingwall (1976) was one of the first theorists to promote the social constructionist viewpoint specifically within medical sociology. The theme had been introduced by Goffman (1963), however, when he drew attention to the stigmatizing aspects of some forms of institutionalized

illness. This theme was further elaborated by Sontag (1977) in her account of the process of stigmatization associated with being diagnosed with cancer. It has been argued that illnesses can acquire a form of popular imagery, which once gained causes sufferers to be seen as a collective rather than as individuals. In her more recent book on AIDS, Sontag (1989) demonstrated how the stigmatizing theme associated with cancer can now be applied to AIDS.

Dialectical theories

Dialectical theories are concerned with the interface between 'reality' as constructed by the individual, for example, as represented within personal construct theory, and 'reality' constructed for the individual, for example, as represented by social constructionism. Dialectical explanations focus on the interrelationship of social and cultural factors, with individual subjectivity and cognitive processes.

The concept of social representations (Moscovici 1984) has been used by social psychologists to bridge the gap between sociological theories, with their emphasis upon socially produced knowledge, and psychological ideas about individual thinking. Moscovici suggested that it is the sharing of common social representations that makes people a social group rather than a collection of individuals. He has been criticized by Rogers (1991),

however, for suggesting that all mental experience is based upon social representations.

Rogers suggested that Moscovici's work contains large gaps in that it focuses:

> 'almost exclusively upon the 'watering down' of expert knowledge by lay people, without looking in any detail at the process in reverse - the moulding of expert knowledge by culturally and socially sedimented ideas.' (Rogers, 1991 p.65)

An interesting approach to studying dialectical processes has been suggested by Potter and Wetherell (1987), who have analyzed discourse to learn about the ways that people think about themselves and their world. They have criticized the popular view in psychology that people are motivated to achieve consistency in what they think and do, and that inconsistency is dysfunctional, or represents a temporary error. They suggest that people are 'competent negotiators of reality', that ambivalence is one of the most interesting features of discourse, and that discourse analysis is a useful technique for highlighting this.

1.3, The study

In the study of nurses which follows, the dialectical dilemmas outlined above are recognized and readdressed in

a number of places throughout the text. A methodology has been developed which owes a lot to Kelly's personal construct perspective and repertory grid techniques, but its scope has been broadened to take account of shared representations as manifest in patterns of shared constructions. The study also focuses upon what might appear to be inconsistent and potentially dilemmatic or paradoxical aspects of construing.

The themes introduced in this chapter will be revisited in more detail in subsequent chapters. Chapter two outlines changes in nurse education and makes reference to models of nursing practice. Chapter three focuses on values, attitudes and beliefs in the context of health and illness, and also introduces the concept of attributional models of helping. Chapter three also focuses on the notion of the 'person in society'. Chapter four introduces personal construct psychology and repertory grid technique as an appropriate theoretical and practical approach to furthering knowledge relating to shared representations. However, the perspective is broadened in chapter five to take account of the interaction between ideology, shared representations, and personal construing. Chapter six provides a detailed outline of the methods used to carry out the empirical parts of the study, the results of which are reported in chapters seven and eight. Chapter nine discusses the results in relation to the theoretical and applied perspectives developed in the earlier chapters, and

chapter ten concludes the study by drawing together the main themes, and considering areas to which the results may potentially be generalized.

CHAPTER 2

Nursing: Education and Practice

2.1 Introduction

In this chapter background information and issues relevant to nursing education and practice are presented and linked to the focus of the empirical study. Changes in the structure and content of nurse education are briefly reviewed, and within the context of this, dilemmas associated with assessing the impact of curriculum change on students' learning are discussed. The role of nursing models in relation to the process of nursing is outlined, and the potential impact of nurses' attitudes on patient care is addressed. The study was prompted by imminent major national changes in the UK, and smaller local changes in nurse education. These changes are summarized in the following section.

2.2, Curriculum Change in Nurse Education

There are likely to be very few educationalists who would disagree with the suggestion that nurse education has been under the microscope for many years. This has both contributed to and resulted from changed views of the learner nurse, and been associated with marked curriculum innovation, and changes in the status of the student nurse.

The different conceptions of, and aspirations for, the role of the learner in nursing were reviewed in 1985 (EPAC, 1985), in a paper which identified change over the previous forty years from the strongly held views favouring the apprenticeship type of training to the currently held 'student status model'. An apprenticeship type of training means that student nurses are a vital part of the work-force and educational needs often have to take second place to meeting service needs.

The 'student status' view was further supported by the United Kingdom Central Council's Project 2000 Report 'A New Preparation for Practice' (UKCC, 1986), which recommended a non-apprentice type training, a common foundation programme for all nurses, and specialist branch programmes in adult, mental handicap, mental health, and children's nursing.

According to the UKCC, the most important reason for advocating this pattern of preparation is that it is the one most likely to meet future health needs:

> 'It is no longer wise to think that a single preparation can serve a lifetime of practice, or to aim to fill the practitioner with all the knowledge and skills she or he will be likely to need ... what is necessary instead is to prepare people for change; to give them the foundation on which to build ...' (UKCC, 1986, p.53).

The eighteen months long Common Foundation Programme (CFP) is intended to provide just this foundation. The UKCC considered there to be areas of knowledge and skills preparation which were relevant to **all** nurses regardless of their speciality. For example they suggested that all nurses would benefit if elements of the then current Registered Mental Nurse (RMN) curriculum were brought into the CFP.

In 1982 a new training curriculum had been introduced for psychiatric student nurses which placed a greater emphasis upon the development of communication and interpersonal skills, with experiential learning and the development of personal meaning being identified as essential to the educational process. The 1982 curriculum change reflected ideological and role changes in psychiatry and psychiatric nursing (Walk, 1961; Clark, 1963; Powell, 1982; Butterworth, 1984), away from an overriding concern to protect the community (custodial care), to a concern for the patient (therapeutic intervention).

Social, psychological, personal and interpersonal knowledge and skills had a considerably raised profile in the 1982 curriculum as compared to previous ones. The UKCC report (1986) drew attention to the significance of these for all nurses, suggesting that students of all branches of nursing would benefit from their introduction into the curriculum. Many schools and colleges of nursing

took this partially on board prior to the formal implementation of the Project 2000 curriculum, which as a result of funding restrictions was only allowed a staggered introduction across the country. It was intended that all colleges of nursing would have introduced it by the year 2000.

The college of nursing in which this study was undertaken was one of those which took steps to introduce some of the ideas from the Project 2000 document prior to the formal commencement of the new programme. A decision was taken to introduce a new RGN curriculum which raised the profile of the social, psychological, personal and interpersonal components of training. The change reflected the enhanced status given by nurse educators, to these curriculum areas for RGN students.

This new programme was an interim measure in that it was superseded by the introduction of the Project 2000 programme in this college of nursing. However its introduction enabled Altschul's (1972) suggestion to be implemented, namely the evaluation of different educational preparations in ways other than by the measurement of patient satisfaction.

Although the educational change was less dramatic than that later brought about by the introduction of Project 2000, it still reflected an element of ideological change and associated curriculum innovation. The question must

therefore be, whether the two together (ideological and curriculum change) had any significant effect on the values, attitudes and beliefs of the student nurses who followed the new training programme.

2.3, The dilemma of assessment

One of the dilemmas facing any educationalist is how best to assess the impact of an educational experience on the learner. One of the commonest methods used is to assess 'learning' via some form of examination or formal coursework assessment. These can be designed to assess factual knowledge at its most concrete, abstract understanding, and problem solving skills.

Knowledge, however, even in its broadest sense, has only a partial influence on professional practice. Skills also have a significant bearing on practice, but even the combined impact of knowledge and skills is likely to be moderated by the values attitudes and beliefs of the practitioner. An educator can 'inform' students and assess learning, but increasingly within nurse education the impact of experience on professional practice is being recognized. This is reflected within the many experiential learning approaches currently being utilized by nurse educators.

Questions remain relating to the impact of professional education on students' attitudes to their professional

role. This is not easily assessed via conventional formal coursework assessments, yet it is important to monitor. It cannot be assumed that formal educational experience will be more influential in shaping nurses' attitudes than clinical practice, or dominant social/cultural ideologies.

The primary focus of this study was on student nurses' construction of their world, but by involving students who had followed different curricula, and comparing them with students who were in their first week of training, the study allowed for similarities and differences between the groups to emerge. The involvement of student comparison groups in the first week of training allowed for the identification of attitudinal features which are not directly the result of RGN education.

It was proposed above, that professional practice is influenced by the knowledge skills and attitudes of the practitioner. It could be argued that as long as the practitioner has clear practice guide-lines to follow, their personal views and attitudes are of no consequence. Nursing is no stranger to guide-lines for almost every conceivable area of practice, and the nursing process provides an overall structure within which to assess, plan, implement and evaluate care. The growing number of increasingly complex nursing models provide conceptual frameworks for guiding practice within the umbrella notion of the nursing process.

2.4, Models of Nursing

The nursing process represents, in theory at least, a systematic approach to care which encompasses four different stages: assessment, planning, implementation and evaluation. A model of nursing is a more detailed conceptual representation of that process. A large number of models of nursing have been developed, each having something to say about: the nature of people, the nature and causes of problems requiring nursing intervention, the assessment planning and goal setting processes, the focus of intervention, the process of evaluation, and the role of the nurse in relation to each of these (Aggleton and Chalmers, 1986).

Nursing Models can therefore be characterized by the implicit and explicit assumptions embedded within them which relate to each of the points above. For example, Henderson's (1966) model of nursing emphasises the existence of biological needs within people. This approach is reinforced within Roper, Logan and Tierneys' (1983) model of nursing, in which sixteen activities of daily living are identified as either essential to the maintenance, or quality, of life. In contrast to this, Johnson (1980) produced a model of nursing in which she identified seven goals towards which she believed people motivate their behaviour. These included meeting

achievement, affiliative, aggressive, dependency, eliminative and digestive needs.

There are many more models of nursing, each with a different focus on the nature of people and the activity of nursing. Many of these are reviewed in Aggleton and Chalmers, (1986), and Fraser, (1990). Each model is elaborated in great detail and nurses have attempted to use selected ones of these as templates for practice. They have, therefore, become guide-lines for good practice, as well as supposedly reflecting the elements and characteristics of nursing, as observed or construed by those who developed the models.

Two questions emerge in relation to the use of nursing models: the first relates to the degree to which they are an accurate representation of the process of nursing, and the second relates to their usefulness as a template or guide-line for practice.

2.5, Nurses' Attitudes and Patient Care

Moss (1988), suggested that in spite of the nursing process and associated nursing models, there is evidence to suggest that nurses deal with types of people, behaviour, and illness, rather than individual patients. This suggests that preconceived ideas influence the process of nursing as much as the detailed models with their associated procedural guide-lines.

Moss quotes studies by Walston *et al.* (1976; 1983), De Vellis *et al.*(1984) and Woods and Cullen (1983) to support this suggestion. Moss' views are further supported by studies relating to patient popularity (Jeffery, 1979; Stockwell, 1972), and nurses' perceptions of their nursing role (Collister, 1983; Wilkinson, 1982; Watts, 1988;). These studies consistently highlight that nurses negatively evaluate certain categories of patients, for example those given a 'psychiatric ' diagnosis.

Other forms of categorisation also occur, for example studies by Copp (1971) and Larson (1977) suggested that nurses believe that people categorized as patients are dependent. Patients are vulnerable to the attitudes and role expectations of professional staff and nurses form a very large and influential core of health care staff. Viney (1985) suggested that even if communication is good between patients and staff, some patient constructs will receive more validation than others from staff. For example helplessness constructs receive more validation than competence constructs. Research also indicates that patients' descriptions of themselves contain many references to helplessness and few to competence (Raps et al. 1982; Westbrook & viney, 1982).

The evidence is that nurses, along with other health professionals, are not neutral in their dealings with

patients. Care guide-lines can only go a certain distance in guiding practice. Knowledge inevitably plays a part in guiding practice, but so do the values, attitudes, and beliefs of the practitioner.

The attitudes of nurses to patients in their care, and the influence of the educational process on the formation of these attitudes is a complex area for investigation. As early as 1972 Altschul suggested experimentation in which nurses with different educational preparations had their effectiveness measured by criteria other than patients' satisfaction with care (Altschul, 1972). She also drew attention to nursing ideology which she considered inseparable from issues concerning the attitudes of nurses to their patients.

2.6, The Study

The study outlined in the following chapters provides detailed information relating to the construing of student nurses who had studied an 'old' RGN curriculum, a 'new' but pre Project 2000 curriculum, and also students who had newly entered RGN training and not commenced any programme. The primary focus was on identifying similarities and differences between the groups, in terms of their representations of patients and their nursing care. The results of this study have significant theoretical and practical implications in their own right, but in addition will provide useful background

information against which to consider subsequent Project 2000 research findings.

This chapter has drawn attention to the potential impact of nurses' attitudes on patient care, the following chapter focuses more extensively on values, attitudes and beliefs and their relationship with health and health care.

CHAPTER 3

Social Cognitions and Health

3.1 Introduction

It was suggested in the previous chapter, that in spite of the nursing process and extensive procedural guidelines being aimed at regulating nursing practice, actual practice is influenced by the values, attitudes, and beliefs, held by nurses. The potential impact of these on the outcome of nursing practice requires further exploration.

Values, attitudes, and beliefs, can be considered under the umbrella label of social cognitions. Marteau (1989) suggested that:

> 'As well as influencing the health outcomes of patients by determining the choice of treatment, staff cognitions may also influence health outcomes of patients by influencing patient cognitions and hence patient behaviour' (Marteau, 1989,p.12).

A study by Marteau and Riordan (1992), sought to investigate whether staff attitudes towards patients are affected by causal attributions. Their results suggested that information about a patient's health habits prior to illness affected staff attitudes to the patient. Staff had significantly more negative attitudes towards patients who had not engaged in preventative behaviour

designed to lessen the likelihood of them developing their medical condition, than to those who had.

3.2, Attributions and Clinical Decisions

An analysis of 'the attributional foundations of the decisions made by therapists in psychotherapy' (Rabinowitz et al. 1988, p.178) indicates that all helpers make judgements about their clients and that these are likely to have a bearing on the helping process. These judgements may be implicit or explicit and the effect they have may be likewise more or less explicit. Amongst the many judgements likely to be made are those concerning responsibility for the cause of a problem and responsibility for the solution to the problem. Rabinowitz et al. (1988), outlined four attributional combinations each of which they suggested defined a particular approach to helping. These four dimensions, summarised briefly below, were based on work by Brickman et al. (1982), where a more detailed description can be found.

The helper attributes:

1) High causal responsibility for the problem on the client, and also high solution responsibility.
2) Low causal responsibility on the client but high solution responsibility.

3) Low causal responsibility for the problem and also low solution responsibility.
4) High causal responsibility but low solution responsibility.

Rabinowitz et al. (1988), suggested that each of the above combinations characterizes a different and distinct model of helping. The first, they suggested, characterizes the **moral** model of helping which was prevalent at the beginning of the century and was used in the treatment of alcoholics and mental patients.

The second, they suggested, represents the **compensatory model** of helping in that clients are not held responsible for the cause of their problems but after help is given they are expected to take responsibility for the solution to it. This approach is reflected in skills training and cognitive behavioural approaches to helping.

The third approach is characterized by the **medical model** in which clients are neither blamed for their problem nor expected to take responsibility for its solution. Change agents are 'expert helpers' with special training.

The fourth approach is depicted as the **enlightenment model**. Clients are encouraged to see themselves as responsible for the cause of their problems, but the solution as being dependent on an outside authority or force. Peer support groups such as Alcoholics Anonymous

and therapeutic communities represent examples of this approach (Rabinowitz et al.1988).

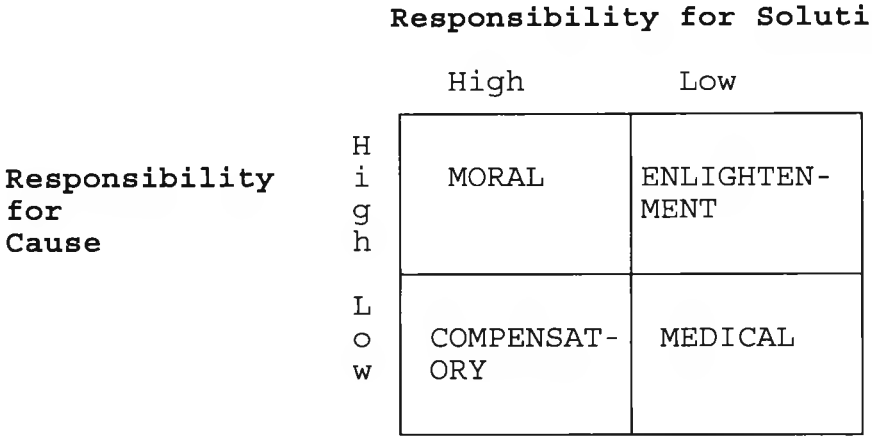

Figure 3.1 Attributional approaches to helping

The terms used to describe the various approaches are somewhat value laden, for example why should the fourth approach be referred to as the enlightenment model, more than any other. However, the notion of a helper adopting a model of helping is a useful one. The term helper can be used to refer to any individual who participates in systematic and planned activities designed to assist others in the effective management of their problems. A nurse could therefore be construed as a helper.

It cannot be assumed, however, that a helper operates according to the pure form of any of these models. It is possible that values attitudes and beliefs operate at an implicit level to influence the process of helping, and also that helpers differentiate amongst their clients in terms of the attributional judgements made.

3.3, Attributional Judgements made by Patients.

Not only do helpers make attributional judgements concerning their clients, but clients also make judgements concerning the causes and subsequent resolution of their problems. Helpers are in a key position to validate these attributions. A study by Johnston et al. (1992), demonstrated that it is possible to alter physiotherapy patients' perceptions of personal control over recovery during rehabilitation, via a psychological intervention involving the addition of a few paragraphs to the routine letter confirming the patient's appointment. Patients who received the routine appointment letter plus some additional paragraphs designed to increase their perceived control over the outcome of the rehabilitation, were found one week after their first appointment, to have, on average, significantly higher levels of perceived control and to be more satisfied with information than the control group.

The findings of this study have significance when considered within the context of an earlier study (Partridge & Johnston, 1989) in which it was found that better progress with recovery from disability was made by patients with a higher level of perceived personal control.

3.4, Self-Blame Attributions

A comprehensive review of literature relevant to victims' attributions of, and subsequent coping with, disease, crime and accidents, was provided by Janoff-Bulman and Lang-Gunn (1988). Attributions, consequent upon a search for meaning, are likely to be made following life events of great personal intensity, personal meaning, and negative outcome. Central to Janoff-Bulman and Lang-Gunn's analysis of this literature is their proposition that although self blame is commonly encountered in these victims, not all self-blame is maladaptive. These authors distinguish between behavioural and characterological self-blame for the cause of an event.

Where behavioural self blame occurs, the cause of an event is considered to be associated with one's own behaviour, but it leaves open the possibility of controlling subsequent outcomes by changing or modifying ones behaviours. In contrast, characterological self-blame consists of blaming enduring aspects of one's character for the occurrence of negative events. Personal control, such as that advocated by Johnston, requires an individual to accept an element of personal responsibility, however it is important that attributions for the cause of negative events are perceived in behavioural rather than characterological terms.

The preceding discussion indicates that helpers and clients make attributions and that these have a bearing on the behaviour of both helper and helped, which in turn impacts on the outcome of the helping relationship. The attributions made by an individual will reflect a combination of the values, attitudes, and beliefs, held by that individual. These however are likely to be an implicit feature of the attributional judgements made by them.

This returns us to the starting point of this chapter where it was suggested that in spite of the Nursing Process and extensive procedural guide-lines, nursing practice is influenced by the values, attitudes, and beliefs, held by nurses. The next section of this chapter provides an exploration of these.

3.5, Attitudes, Values, and Beliefs

A useful place to commence the exploration is to review the relationship between values, attitudes, and beliefs. Definitions of attitudes vary considerably although there is general agreement that a person's attitudes to a specific object or situation represents a predisposition to respond to that object or situation in a particular way. Attitudes can be represented in terms of thought, feelings and behaviour. The notion of value is inextricably linked with that of attitude and the two terms are frequently used interchangeably. It has been

argued, however (Rokeach 1980), that 'attitudes are organized around objects or situations, whereas values transcend the objects or situations that ''activate'' them' (Horley, 1991, p.2).

Horley suggested that the process by which this transcendence occurs is not clear and that a label such as freedom or happiness only maintains its full meaning in some referential context. Kilmann (1981) argued that interpersonal values represent evaluative dimensions and that no distinction between ethical value and attitude appears possible. The notion of evaluative dimensions is supported by attitude researchers Fishbein and Ajzen (1975), who described a value as a bipolar evaluation. Horley (1991) suggested that self-knowledge and self-identity can be seen in terms of taking stock of values.

Not only is the term value closely linked with that of attitude, but the terms attitude and belief are sometimes, but perhaps less accurately, used interchangeably. Beliefs can be of two kinds: value beliefs, and non-value or ordinary beliefs. All beliefs represent ways of making sense of the world. Ordinary beliefs:

> 'refer to propositions about the nature of the world (past, present, and future)...' they 'can be examined by appeal to empiricism, authority, or any knowledge source. Beliefs have been described (eg. Abelson, 1979) as the basic building blocks of knowledge systems...' (Horley, 1991, p.8).

Ordinary beliefs will not entail an emotional component and can be considered as distinct from attitudes or value beliefs. An example of an ordinary belief statement would be 'I believe that smoking is linked to the incidence of lung cancer'. The belief statement may not be correct although the speaker believes it to be, and it can be examined by appeal to empiricism.

An example of a value belief statement reflecting an attitudinal position, again on the subject of smoking, would be 'I believe that smoking should be banned in all public places' or 'I believe that smokers who suffer from respiratory problems are less deserving of care than non-smokers suffering from such problems'. Both statements reflect value beliefs and say as much about the person uttering them as they do about the subject. Attitudes and value beliefs are more difficult to dislodge than ordinary beliefs as the latter respond more readily to the input of new information than the former. Changes in value beliefs are also very likely to involve emotional arousal, which is not always welcomed by the individual.

The distinction between ordinary beliefs and attitudes is vitally important to understanding health related behaviours. A good example relates to health education programmes. Many programmes focus on the provision of information with the expectation that knowledge will bring about a change in behaviour. There is an expectation for example that a knowledge of the risks of

smoking will reduce the incidence of smoking. Knowledge, however, is likely to have an effect on ordinary beliefs but not necessarily on value beliefs and it is these which are likely to govern an individual's smoking behaviour. A knowledge of the risks does not imply that non-smoking will be valued more highly than smoking. Focusing on ordinary beliefs and the provision of information represents a superficial approach to understanding and implementing change.

This same distinction applies equally to nurse education and practice. An educational approach which is informative and focuses on ordinary, non-value beliefs about nursing care and practice may have little bearing on nurses' actual practice if the nurses' value beliefs are ignored. An individual's value beliefs and ordinary beliefs may not be in harmony. For example a nurse may learn that a particular kind of nursing care is most likely to aid a patient's recovery. However, if the nurse does not believe that a particular patient is fully deserving of that care, or is incapable of involving themselves in that care, this will affect the actual nursing carried out. This lends support to the suggestion (Moss, 1988) that although the Nursing Process and associated Models of Nursing, provide in theory at least, an effective framework for practice, nurses' attitudes are very significant determinants of patient care.

The social context

The indications are that the practice of nursing can only be understood via an exploration of nurses' ordinary beliefs and value beliefs, and that these can only be meaningfully considered within a social context. Attitudes values and beliefs do not exist independently of the social context within which they emerged. This notion is reinforced by social learning theorists (Rotter, 1954; Bandura, 1977):

> 'The potential for a behaviour to occur in any specific situation is a function of the expectancy that the behaviour will lead to a particular reinforcement in that situation and the value of that outcome' (Rotter, 1954, p.102).

Bandura (1977) outlined in detail a theory of social learning which represented an attempt to provide a unified theoretical framework for analysing human thought and behaviour. The theory is based on the notion of a continuous reciprocal interaction between the individual and the environment. Central to this interaction are an individual's observations of events and behaviour and their awareness of the relationship between behaviour and its consequences.

Bandura referred to an individual's belief in their ability to effect a successful outcome as self efficacy. A lack of self efficacy beliefs is likely to be associated with not attempting particular behaviours

unless the reward is associated with the attempt rather than the outcome. Social learning theory is based on an expectancy-value model. It posits that individuals behave in ways most likely to result in the successful attainment of desired goals. An individual's choice of goal reflects their personal value system and also normative pressures.

The Theory of Reasoned Action

The Theory of Reasoned Action (TRA) (Fishbein and Ajzen, 1975 & Ajzen and Fishbein 1980), and the Theory of Planned Behaviour (TPB) (Ajzen, 1991) deal more directly with the relationship between attitude and behavioural intention, taking account of an individual's attitude towards a particular behaviour, the social pressures on the person to behave in a particular fashion, referred to by Fishbein and Ajzen as the 'subjective norm', and the amount of control the individual perceives themselves to have over the behaviour in question.

'The TRA/TPB has been successfully applied to the prediction of a number of health behaviours' (Connor 1993, p25). Referring to a meta-analysis by Sheppard et al. (1988), Connor reported that behavioural intention is normally well predicted by the three components identified above, with a multiple correlation of around 0.7, while the correlation between intention and behaviour is normally above 0.4 (Six and Schmidt, 1992).

In spite of enjoying relative success, the theory is open to a number of criticisms which can also be taken to apply to most other psychologically derived social cognition models. These limitations are outlined below.

TRA/TPB is based on the assumption that most human behaviour is under voluntary control, and it can be criticized for ignoring mindless or habitual behaviour. It also provides no clarity concerning the relative weight given by an individual to personal attitude and the subjective norm. Abraham and Sheeran (1993) also drew attention to the lack of assessment of a person's preparedness to deal with the social consequences of behaving in a particular way.

> 'Successful performance is more likely to depend upon knowing what kind of approval or disapproval is likely from whom and what resources can be deployed to deflect or reduce such approval' (Abraham and Sheeran, 1993, p.22)

The TRA/TPB, like other social cognition models, can also be criticized for paying relatively little attention to the social context in which decisions take place, in terms of social, economic and environmental influences (Connor, 1993). There is also little attention given to the ways in which behaviour is socially constructed within moral frameworks, and the identification of conflicting demands upon the individual (Ingham, 1993).

The following sections review literature relating to the social context of thought and behaviour, focussing on the dialectic relationship between individuality, and the social construction of the person.

3.6, The Person

Closely linked with the notion of individuality is the concept of the person. Jarvis (1987, p.37), referred to the work of Paterson who suggested that persons are:

> conscious selves, moving centres of action and awareness, whose being is the radically finite being of individuals conscious of the shifting but ever-present limits placed upon their being by time, space and matter, but conscious also that these limits exist to be surpassed. (Paterson, 1979, p.15)

Paterson also wrote (1979, p.32) that' the concept of 'person', however, is an open-ended concept. It is conscious selves who evolve as persons,..'. Thus for Paterson one condition of self and thus personhood is conscious awareness. Mead (in Strauss, 1959) regarded the conscious self as 'mind'.

The position taken by Jarvis (1987, p.39) 'is that the person is body, mind and self and that the latter two components have a social constitution'. He went on to suggest that:

> Mind and self, then, are additions to the body, acquired through the process of social living and are major factors in the learning process, because

> they themselves have developed as a result of social learning. Both are social constructs so that the person may be regarded as a social construct. (Jarvis, 1987, p.39)

The person in society

Jarvis (1987) presented Mead's argument that consciousness emerges as a result of social behaviour, concluding that the development of mind is related to the social structure within which people live. This raises the question of whether there is any independence of thought, or mind is merely the reflection of dominant social influences. In other words, do people have any individuality?

The position taken by Mead (in Strauss, 1959, p192) is that minds become independent when they have developed 'an organized set of attitudes'. However if we return to the position held by Jarvis that mind is a social construct, then it follows that people's minds 'and the language through which they are developed, are constrained within the social parameters' (Jarvis, 1987, p.45).

This view is consistent with that of Mannheim who specified that:

> Only in quite a limited sense does a single individual create out of himself the mode of speech and thought we attribute to him. He speaks the language of his group; he thinks in the manner in which his group thinks. He finds at his disposal only certain words and meanings. These not only

> determine to a large extent the avenues of approach to the surrounding world, but they also show at the same time from which angle and in which context of activity objects have hitherto been perceptible and accessible to the group or the individual (Mannheim 1936, p. 22, quoted in Jarvis, 1987, p.43).

Individuals are socialised into their sub-cultures and according to Marx and Engels the dominant culture of any society is created and maintained by those who have power in that society. Hence we return to the position that the development of mind, which is connected with the development of language and thought, is related to the social structure within which people live. This in turn is related to the dominant intellectual force of those who have power in that society or sub-group of society. This leads one to question whether, if mind is a social construct, individuality can exist. However, if the position taken by Jarvis (1987, p.39) is returned to, then the person is body, mind and self. It is suggested by him, however, that the self is also formed in the context of social interaction. This view concurs with that of Mead:

> For Mead, the self comprises two elements - the 'I' and the 'Me'. The former is the response of the organism to the attitudes of others, while the latter is the organised set of attitudes of others ' which the self assumes. (Jarvis, 1987, p. 53)

Jarvis went on to suggest that:

> Mead would claim that there is a constant in the self in as much as it reflects the constancy of the socialisation process. Hence, while individuals may have several selves, all of which reflect their

> position in the social structure, the 'I' is a consistent experience which may actually be the amalgam of the several experiences which constitute it (Jarvis, 1987, p. 54).

Constructing meaning

A notable theorist with an interest in 'the self' was Luckmann, who suggested (1967, p.50) that an organism becomes, or acquires, a 'self' by constructing with others an 'objective and moral universe of meaning' (Jarvis, 1987, p.56).

The term 'constructing' implies that individuals engage in an active process of meaning making, rather than a passive process of absorbing meaning. That individuals have the capacity to actively construct systems of meaning is consistent with the theories presented by Piaget (1929), and Kelly (1955), and points to at least some degree of individuality.

Active construction and meaning making requires active questioning. Some questions can be answered by reference to empiricism, others cannot. We thus have two types of 'knowing'; One located in empiricism and the other in 'belief'. This belief system can be equated with the value beliefs referred to earlier in this chapter, however it may also extend beyond this. Ordinary beliefs are in theory empirically testable, however, many such beliefs represent handed down 'knowledge' and often

competing theories of the 'truth' exist. Implicit value beliefs and social norms are therefore likely to play a part in framing even the ordinary beliefs held by an individual.

Incongruity and learning

If an individual's ordinary (empirically testable) beliefs and value beliefs are congruent with their experience there is no need for them to pose questions of meaning. Where there is disjuncture, if this is recognized and accepted by the individual, questions of meaning can result in change in ordinary and or value beliefs. Jarvis proposes that it is the recognition of incongruity between belief and experience that results in the start of the learning process for an individual.

Returning to the earlier question of whether individuality exists, the position is taken that the person has the capacity to engage in the construction of meaning, but simultaneously with this occurring an element of absorption must necessarily manifest. This is inevitable since meaning is itself socially constructed and mediated via language, which is yet another social phenomenon.

The notion of individuality can be considered within the context of learning. If learning is construed as the passive acquisition of factual knowledge, questions of

meaning may not arise and changes in self will not feature. If, however, learning is represented as an active search for meaning arising from a questioning approach to disjuncture, then a degree of individuality is implied. However, this individuality is itself embedded within a social context.

In relation to the research study to be outlined in the subsequent chapters, the question arises as to how the planned learning experience in which the students engaged impacted on the ways in which student nurses construed patients and their nursing care. It has been suggested by previous researchers (Franks 1992) that the self becomes submerged in training at the expense of the professional self. However this presupposes that the self is indeed individual and not merely a representation of an alternative social self which becomes modified during training in order to produce a system of meaning congruent with the social system of nursing. Indeed, Lawton (1973, p.21) regarded the curriculum as a selection from culture, and education the means whereby that culture is transmitted to the individual learner.

Professional education can therefore be construed as representing the transmission of aspects of the professional sub-culture, selected by those who have power and responsibility, which it is considered should be passed on to new recruits. However, this process

occurs within, and is influenced by, an overarching and ever changing social system.

It is for this reason that Jarvis states that:

> ...the study of learning is as much the prerogative of the sociologist as it is of the psychologist. Learning is a rich social process and to restrict it to the individualistic processes of some psychological research is to render it a disservice. (Jarvis, 1987,p.14)

In order to explore the value and belief systems of student nurses a compatible theoretical and research methodology is required. In the following chapter the personal construct perspective, developed from the work of George Kelly, will be explored in relation to the ideas developed in this, and previous, chapters.

CHAPTER 4

Personal Construct Theory and Repertory Grid Technique.

> This paper throughout deals with half-truths only. Nothing that it contains is, or is intended to be wholly true. The theoretical statements propounded are no more than partially accurate constructions of events which, in turn, are no more than partially perceived. (Kelly, 1969a p. 66).*

4.1, Theoretical Perspective

The statement above reflects Kelly's concerns about 'absolutism in modern science' (Kelly, 1969a, p. 67). He suggested that one of the troubles with otherwise good theories in the various fields of science is the claim to infallibility which is so often built into their structure. Facts, he considered, are open to reconstruction. 'What is observed is not revealed but only construed' (Kelly, 1969a, p. 67), and even a good theory can soon become a dogmatism serving to blind us to new perceptions of facts.

These ideas are central to George Kelly's (1955) theory which he called 'the psychology of personal constructs'. Kelly was concerned with personal meaning, which he suggested 'should prove no less valuable to the scientist than it has to the psychotherapist' (Kelly, 1969a, p.74).

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* This paper first appeared in Lindzey, G. (Ed.), *The Assessment of Human Motives*. New York: Holt, Rinehart, Winston, 1958.

In keeping with the themes emerging from the previous chapter, Kelly's theory focuses on the experience of the individual and the way in which these experiences are construed. He described his theory as being 'a theory of man's personal inquiry - a psychology of the human quest. It does not say what has or will be found, but proposes rather how we might go about looking for it' (Kelly, 1970,p.1). Central to Kelly's theory is the basic premise that 'a person's processes are psychologically channelised by the ways in which he anticipates events' (Kelly, 1969a, p. 86).

Kelly's view of man was of 'man the scientist'. According to his philosophy, each person holds a representational model of the world which enables him to chart a course of behaviour in relation to that model. Constructions of reality are constantly tested out and modified to allow better predictions in the future. Hence an individual's model is subject to change.

> Thus for Kelly the questioning and exploring, revising and replacing in the light of predictive failure which is symptomatic of scientific theorising, is precisely what a person does in his attempts to anticipate events (Pope, 1980, p.3).

The view of man held by Kelly is closely akin to views of the learner held by progressive educationalists such as Pope who emphasises the activity of the learner struggling to impose meaning upon personal experiences.

Kelly recognised learning as a personal exploration and saw the role of the teacher as that of helper in this exploration. Central to the process of learning is the notion of experience, however, according to Kelly, the amount of a person's experience is not measured by the number of ''events he is engaged in'', 'but by the investments he has made in his anticipations and the revisions of his constructions that have followed upon his facing up to consequences' (Kelly, 1970, p.19).

Kelly believed that if we never alter our constructions, all that occurs during our life is a sequence of parallel events which have no psychological impact. He construed the unit of experience as a cycle having five phases: anticipation, investment, encounter, confirmation or disconfirmation, and constructive revision (Kelly, 1970, p.18). This is reproduced in diagrammatic form below.

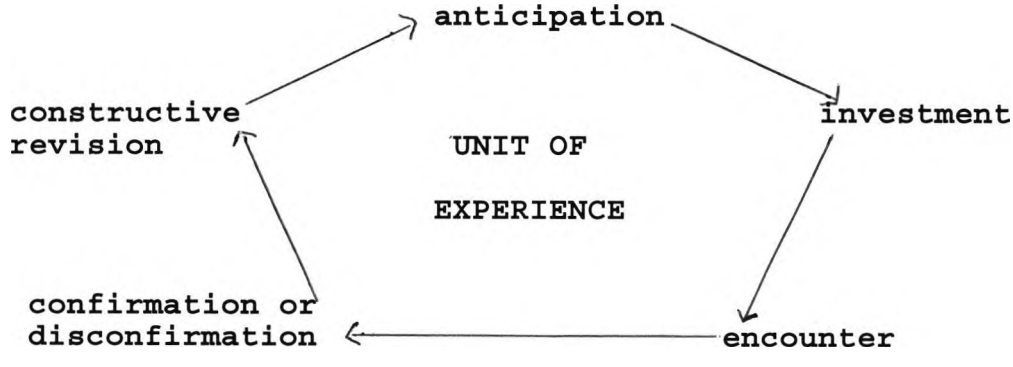

Figure 4.1 Diagrammatic representation of the five phases of the unit of experience (Watts 1991: adapted from Kelly, 1970).

Kelly believed that we all make sense of experiences by considering them in relation to our very personal system of construing, that is to say, by applying personal constructs to them. Personal constructs are mental constructions, or ideas of a bipolar kind, which represent a perception or thought relating to a specific object, event, person, or behaviour.

Kelly made a distinction between constructs and concepts. Constructs form a network and have no existence independent of the person whose thinking they characterize. The question of whether they are logical has no bearing on their existence for they are a 'psychological rather than a logical affair' (Kelly, 1969a, p.87). Concepts on the other hand 'have long been known as units of logic and are treated as if they existed independently of any particular person's psychological processes' (ibid).

Constructions of reality are constantly tested out and modified to allow a better 'fit' between the network of constructs held by an individual and their personal experience. The reciprocal and dynamic relationship which exists between an individual and his experience results in an individual's representational model of the world being subject to change. However, even that experience which does not support an individual's system of construing, does not always result in modified

constructions of reality. In other words the experience is not always used to allow us to become more effective 'scientists' or to increase our personal knowledge or self awareness.

Construct systems

Kelly suggested that because of the complex interdependent relationship between constructs in an individual's system, a revision of one construct could have a disruptive effect upon other parts of the system. In other words one small change can have a ripple effect and cause disjuncture, or incongruence in other parts of the system. Therefore, although the theory of constructive alternativism states that we make sense of our world in an individual and personal way and that there are always alternative constructions which can be explored, we do not always allow ourselves to do this even if our experience disconfirms already held constructions. When this occurs we experience what Kelly referred to as a 'sequence of parallel events' with no psychological impact. Learning is restricted by occurring within a closed system of personal construing.

Kelly suggested that people make bridges between past and future via the erection of personal constructs which are organised into a personal system which is no more conscious than it is unconscious, and no more intellectual than emotional. This system provides the

person with 'freedom of decision and limitation of action - freedom, because it permits him to deal with the meanings of events rather than being helplessly pushed about by them, and limitation, because he can never make choices outside the world of alternatives he has erected for himself' (Kelly, 1969a, p.88). A person could therefore be construed as having an element of choice but not total freedom of choice.

Kelly refers to choice being limited by the world of alternatives a person has erected for himself. The theory focuses on personal constructs and the role of the individual in meaning making. The notion of constructs being examples of social representations is not addressed. As well as choice being limited by the world of alternatives a person has erected for himself, it is likely to be limited by a socially created range of alternatives. Individual choice occurs within the context of social constraints.

Returning to the ideas of the previous chapter, it could be concluded that the person is a social construct and that any individuality or choice on the part of the person is constrained within social parameters. This is not, however, inconsistent with the view of the person as an active meaning maker.

Kelly saw a place for a methodology which allows a person to elaborate on his personal meaning of events. This

concern led to the development of his repertory grid techniques which provide a useful means of learning about the system of constructs held by an individual. The methods which have evolved from Kelly's theory represent ways of exploring an individual's implicit or explicit view of the world, that is to say, their personal psychology.

4.2, Psychological Research

Repertory grid techniques have been used to increase self awareness in psychotherapy and in education, and also as a research tool for exploring the values beliefs and attitudes of a particular individual or group of individuals. The diversity and complexity of research questions emerging as a natural development of Kelly's theory, is matched by the number of increasingly complex techniques for exploring these. Before proceeding to discuss research relevant to the preceding discussions and also the study that will be outlined in subsequent chapters, it is pertinent to draw attention to a number of Kelly's ideas concerning the nature of psychological research.

> The strategy of psychological research has its philosophical roots and its everyday techniques. It employs man's intellectualisms, but it makes full use also of what many still regard as his irrational stupidities. It concerns itself with constructions that successively approximate the truth, not with the mere accumulation of fragments of truth. It disengages from old scholastic conclusions and reengages with man. It experiences. It tests. It reappraises. But most of all, it seeks to mobilize

> all the resources of man - experimenter and subject - and not those of formalized logic alone. (Kelly, 1969b, p.132)

The quote above, like the one at the start of this chapter, reaffirms Kelly's concern about absolutism. It also highlights the reflexive nature of his theory. 'I am proposing the same psychology for the researcher as for the man he studies' (Kelly, 1969b, p.121). Kelly suggested that a primary issue connected with getting at the 'essence of nature' relates to the limits of the construction complexity of the researcher and those with whom he must test out his hunches. This in turn is linked to the striving for the establishment of certainties via formalized logic. Kelly suggested:

> Man does not always think logically. Some take this as a serious misfortune. But I doubt that it is. If there is a misfortune I think it more likely resides in the fact that, so far, the canons of logic have failed to capture the ingenuities of man, and, perhaps, also in the fact that so many men have abandoned their ingenuities in order to think ''logically'' and irresponsibly (Kelly, 1969b, p. 114).

Kelly suggested that human progress depends upon the selective creation of uncertainties, the pin-pointing of doubts and the formulation of new questions and issues. We have a logic of answers but we now require a logic of questions.

> ..'in ruling out all the questions for which no empirical answers could be foreseen the logical positivists aborted the embryonic questions out of which viable issues develop ... Yet doubts and issues are important and answers make no sense without them. ... a pat answer is the enemy of a

> fresh question. ... Nature can be regarded as open to an infinite variety of alternative constructions - some of them better than others, to be sure - and with most of the best ones yet to be concocted (Kelly, 1969b, p115).

Kelly was concerned to develop a research methodology which was consistent with the philosophical roots of his personal construct theory yet was sophisticated enough to present a complex psychological picture of the person. He drew attention to the increasing emphasis psychological research has placed on multivariate methods in recent years, which he believed was in order to cope with 'too much uniqueness'. He suggested that an alternative way to envision the multivariate approach was to see it in terms of an interweave of events and constructs - or observations and issues, each fixing the other in psychological space. He suggested imagining an array of events or objects which are to be understood in a complex manner.

> We can arrange those events according to some issue - or construct - placing those to which one pole of the issue is more appropriately applied on one side and those to which the other pole is more applicable on the other. Having done that we can scramble the events and rearrange them in terms of another construct. As this rearranging proceeds, each event becomes locked into psychological space in greater depth. That is to say, an event seen only in terms of its placement on one dimension is scarcely more than a mere datum. And about all you can do with a datum is just let it sit on its own continuum. But as the event finds its place in terms of many dimensions of consideration it develops psychological character and uniqueness (Kelly, 1969b, p118).

However, Kelly drew a distinction between a science of dimensions and units, and a science of categories and pigeonholes. In one case objects are differentiated, in the other they are concretely arranged. He considered a psychology of categorisation to be quite different from a psychology of differentiation. Kelly's psychology is constructive in that it uses abstractions and generalizations in order to 'differentiate among his (man's) acts and to differentiate between what he once was, what he now is, and what he may choose to become' (Kelly, 1969b, p.120).

4.3, Grid Technique

Kelly provided a theoretical and philosophical basis for the development of methodologies designed to tap into the multivariate dimensions of an individual's construing of events and issues. The technique he devised, which may take a variety of forms, has become known as repertory grid technique. The grid represents a way of recording, and assigning a mathematical value, to the relationship between an individual's construing of particular events or situations. It allows for the production of an 'ideographic map' of the way an individual sees an aspect of their world at a particular point in time.

The repertory grid relies on the notion of constructs being bipolar. Kelly's argument was that we never affirm anything without simultaneously denying something, and

that we make sense of our world by simultaneously noting likeness and difference. It is possible to use a simple bipolar grid where each of the elements within a grid is allotted to one pole of a construct or another; or to rank elements from the most like to the least like a construct; or alternatively to rate the element/construct relationships, for example on a five point scale. In each case it is the bipolarity which allows for the creation of a matrix depicting the interrelationship between elements and constructs (Fransella and Bannister, 1977). For examples of these see Tables 7.2 to 7.5 and 8.1 to 8.6.

Repertory grid technique represents a *method* of producing an ideographic map of the structural relationship between elements and constructs at a particular point in time. It was not designed as a *test* for 'scoring correct answers'. The 'results' produced by a grid can be used to prompt a more focussed discussion about the nature and process of construing than might have been possible without the grid, they are not an end result in themselves.

A number of complex technologies have been designed by psychologists to facilitate the process of producing a structural map. This prompted Fransella and Bannister (1977) to warn of the dangers of being caught up in the 'number game' and of overlooking the many interesting things that can be done by working with the grid's raw data. A preoccupation with the mathematical aspects of

grid analysis can result in researchers undervaluing the original theories and intents of Kelly. The techniques can be used independently of the underpinning philosophy and theory, but when this occurs much of the essential quality of personal construct psychology is lost.

An intention to use grid technique in a manner which is consistent with personal construct theory still faces the researcher with a number of problems and difficulties. Fransella and Bannister (1977), caution those intending to use grid technique regarding a number of these. One such example relates to whether or not the researcher should use elicited or provided constructs. They argue that there is no definite evidence that constructs should not be provided, but there is some evidence to suggest that results using provided constructs produce meaningful results, (Nystedt, Ekehammar and Kuusinen, 1976), and that they are significantly related to the behaviour of individuals (Fransella and Bannister, 1967).

Another issue which Fransella and Bannister suggest should not be ignored, is the context in which constructs are used. Constructs can have different implications depending upon the context in which they are used. Hinkle (1965) suggested that contextual confusion could produce low construct interrelationships and ambiguity.

4.4, Research Relevant to This Study.

Research within the framework of personal construct theory which has particular relevance to this study is outlined briefly below. The first of these relates to the development of an individual's conceptual structures and is concerned with the differentiation and integration of constructs in an individual's cognitive development. Adams-Webber (1970) suggested that the normal course of development in an individual's personal construct system involves the progressive differentiation of its structure into independently organised sub-systems, and the increasing integration of the operations of these sub-systems within the system as a whole. Thus there is movement from a global, undifferentiated system into a differentiated, hierarchically arranged, integrated system.

Bieri (1955), devised a method of measuring individual difference in cognitive structure. Subjects who sorted figures in an identical or near identical way on every construct were designated by Bieri as 'cognitively simple' (undifferentiated) whereas those who sorted figures differently on every construct were designated as 'cognitively complex' (differentiated). Adams-Webber (1969) suggested that the more differentiated (cognitively complex) the structure of an individual's personal construct system, the more readily able he was to grasp the diverse viewpoints of others.

Crocket (1965), assumed that cognitive differentiation increased as an individual gained experience with different aspects of his environment. He also hypothesized that subjects who were high in cognitive complexity, compared to those of low cognitive complexity, had a tendency to assume that others were less similar to themselves. Research based on Bieri's repertory grid measures of differentiation (1955), indicates that subjects discriminate more among negative people than they do among positive. Miller and Bieri (1965) explained this finding in terms of their 'vigilance' hypothesis which postulates that individuals have a tendency to 'keep an eye' on negative figures in order to distance them, and that to do this effectively requires a degree of cognitive complexity in the construing of these figures.

Bannister (1960, 1962), argued that the degree of statistical association between constructs in repertory grid data reflects the level of integration of the subject's conceptual structures. The GAB (Grid Analysis For Beginners) computer program (Higginbotham and Bannister 1983) allows for exploration of the conceptual links between a person's ideas by demonstrating the statistical associations between these. It is important to remember, however, that these statistical associations are derived from ideographic data, and also that

construct relationships only have meaning in relation to the context within which they emerged.

Landfield (1971) carried out a study in which he measured what he termed an individual's 'functionally independent construction'(FIC) scores. He suggested that moderate scores may relate to the most effective functioning. Very high scores may reflect confusion and very low scores indicate simplicity. Zimring (1971) argued that differentiation and integration are separate but equally necessary processes in the evolution of an individual's personal construct system. This accords with Adam-Webber's suggestion (1970), that the normal course of development of an individual's personal construct system involves both progressive differentiation and increasing integration.

An Individual's system of construing is clearly not static and conceptual structures are likely to develop and change. Ryle (1975), hypothesized, however, that those constructs which account for a relatively high percentage of the total variation in a grid will prove more resistant to change over time than will those constructs which account for relatively little overall variance. Findings from the tests which he administered are consistent with this hypothesis.

Personal construct psychology and psychotherapy

Landfield (1971) carried out research within the general framework of personal construct theory, which related to the conceptual changes which occur in psychotherapy. He hypothesized that the therapist's capacity to provide his/her client with 'problem-solving' stimulation is enhanced whenever there is a difference between the therapist and the client in the degree of organisation of their respective personal construct systems.

Viney (1990), like Landfield (1971), is concerned with the processes of reconstruction which occur within psychotherapy. This results from the following premise:

> People construe themselves and their worlds and act accordingly. They do not react directly to the physical world but rather to their interpretations of it. Constructs, and for that matter narratives, are developed out of interactions of self and world (Viney 1990, p.450).

Viney construes her primary aim as a reconstructive therapist as being to understand the construing of her clients, and also considers it important that her construing of herself and other people and events is open to change. 'Ideally this process of change never stops even for the most mature therapist' (Viney 1990, P.444).

Kelly believed that for interpersonal relationships to occur one person construes the construction processes of another and is thereby able to engage in a social process

involving the other person. To form a relationship with another we need to try and understand their perspective or outlook. Understanding does not have to be complete, nor reciprocal, but the degree of understanding and reciprocity will influence the nature of the relationship.

Social cognition involves making inferences about the construct systems of others. From this it follows that effective communication and interpersonal skills depend on a degree of cognitive complexity which involves both differentiation and integration within an individual's personal construct system.

Cognitive complexity and communication

A number of assessment procedures have been developed to operationalize the construct of cognitive complexity (for reviews, referenced in Applegate, Kline & Delia (1991), see: Leitner, Landfield, & Barr, 1975; Miller & Wilson, 1979; O'Keefe & Sypher, 1981; Streufert & Streufert, 1978). The two measures most often used in social cognition and communication research are Bieri et al's (1966), grid based measure, and Crockett's (1965), Role Category Questionnaire (RCQ).

> 'Bieri et al's. complexity measure assumes that personal constructs are dimensions of judgement and that cognitive complexity is the degree of redundancy among constructs as they are applied to role figures. Derived from Kelly's (1955) Role Construct Repertory Test, Bieri et al's. measure

> requires subjects to identify persons they know who fit a series of role descriptions; subjects then rate the role figures on a list of attributes either elicited from subjects or provided by the experimenter. High similarity in construct ratings on each role figure denotes low cognitive complexity, whereas low similarity denotes high complexity (Applegate, Kline & Delia, 1991).

Crockett's (1965) RCQ is derived by subjects identifying a number of individuals known to them, then mentally comparing and contrasting the individuals and providing free response descriptions of the individuals. The descriptions are scored for the number of distinct constructs, using coded procedures developed by Crockett, Press, Delia, and Kenny (1974).

Studies by Applegate, Kline & Delia (1991), and Kline Pelias & Delia (1991), were designed to compare the predictive validity of Bieri et al's. and Crockett's, cognitive complexity measures on communication functioning.

> 'Given the theoretical position that complexity should be a determinant of sophisticated communication functioning, it would appear that Crockett's measure of complexity exhibits greater predictive validity than Bieri et al's measure' (Applegate Kline & Delia, 1991).

The superiority of Crockett's measure held true also for the study by Kline, Pelias & Delia (1991).

Limitations of measures

Crockett's measure has been found to correlate with an individuals ability, under test situations, to demonstrate skilled communication behaviour. Bieri et al's. measure demonstrated the actual patterns of construing adopted by subjects in relation to role figures identified by them. Communication in real life settings reflects an interaction between the range of constructs available to an individual, (Crockett's measure) and the way in which these are actually employed (Bieri et al's measure).

Both measures contain inherent limitations when it comes to predicting actual communication behaviour in non-test situations. Even if Crockett's measure accurately predicts an individuals *potential* to construe social behaviours in a multidimensional way it does not mean that this potential will always be realised. Values, attitudes and beliefs may influence the motivation an individual has to make the effort to accurately infer the personal axes of reference of another. Under test conditions the potential may be realised, in real situations it may not.

By identifying the degree of redundancy of constructs as they are applied to role figures, Bieri et al's measure highlights complexity in action rather than potential complexity. It cannot be assumed, however, that because

an individual is construing in a 'cognitively simple' way that they could not, under different circumstances, demonstrate complexity. Account therefore needs to be taken of the interaction between potential complexity and attitudinal factors which may interfere with the realization of this. Interpersonal relationships are likely to require both construing and reconstruing of self and others.

> Both participants in psychotherapy can be seen as involved in reconstruction through the sharing and rebuilding of narratives (Viney 1990, p.437).

The assumption underpinning this statement is that sharing and mutual reconstruction will be general features of effective interpersonal communication and understanding.

4.5, Nurse Patient Relationships

Nurses, like psychotherapists, are involved in establishing therapeutic relationships with their clients/patients. If a nurse construes a patient solely in terms of his/her own unchanging construct system, there is a danger of a reality being created to which the patient is expected to conform. Patients who do not conform are in danger of being perceived as 'problem patients' and coming within the unpopular patient category identified by Stockwell (1972). Following a review of the popular/unpopular patient research, M.

Kelly and May (1982), concluded that the good patient was one who confirmed the role of the nurse whereas the bad patient denied that legitimation. This has relevance when one considers Kelly's notion of 'role' behaviour as being not just something to act out, but a means of understanding the world. This differs from the notion of role, often applied in social psychology, as a socially prescribed set of expectations.

It seems reasonable to suggest that nurse patient relationships, and hence the nature of the helping relationship, represent considerably more than the acting out of a socially prescribed set of behaviours, and also that they are not necessarily closely correlated with a nurse's potential for construing in a complex way. The relationship is likely to be influenced by the nurse's construing of the patient, and him/herself in relation to that patient, and also other significant aspects of the 'world' within which they both interact.

4.6 Summary

This chapter has outlined some of Kelly's ideas about psychological research and the 'person as a scientist', drawing attention to the relevance of some of the ideas for understanding interpersonal communication. Attention has been drawn, however, to some limitations of 'mechanistic' measures of cognitive complexity and the

use of these in assessing the relationship between cognitive complexity and interpersonal communication.

The importance of a nurse's construing of the patient, and him/herself in relation to the patient, is acknowledged as a fundamental dimension in the establishment of therapeutic relationships. However, a nurse's construing is influenced by, and representative of, his/her values attitudes and beliefs, and these reflect aspects of prevailing ideologies. Construing is therefore both personal and representative of 'social reality'. The following chapter focuses further on the interface between construing as a personal and a social act, and explores further the ideological dimensions of construing.

CHAPTER 5

Shared Representations and Ideology

5.1, Shared Representations

The previous chapter concluded with the statement that 'construing is both personal and representative of "social reality"'. The implication of this is that the social context of thought cannot be ignored. This concurs with the ideas of Serge Moscovici (1984) who was critical of psychological theories of thinking which ignored the social context and basis of thought and thinking, and also of sociological theories which ignored the thinking of individuals. Moscovici advocated the study of the 'thinking society' and publicised the concept of social representations as providing a bridge between individual thought and socially constructed knowledge. Social representations, depicted within shared aspects of construing, would be manifest by social groups sharing a common reality.

The term shared representations is preferred by this author since it is arguable that it does not carry with it the same attributional connotations of the term social representations. Both 'personal' construct theory, and concepts to do with 'social' representations, implicate a source: for the former, constructions of reality are attributed to the person, whereas for the latter they are

attributed to the 'social' context. The 'implication' of social representation is that where representations are shared, common social factors have played a contributory part. The term 'shared representations' is more neutral and does not imply a causative agent. It remains possible to entertain notions of representations being shared and asocial, and also for them to be coincidentally the result of very different cultural and biographical experiences and yet still shared.

In a similar vein to Moscovici but within the more specific context of adult learning, Jarvis (1987) drew attention to the disservice some psychological research has done to the study of learning by restricting its focus to individualistic processes. Jarvis suggested that learning always occurs within a social context, that the learner is to some extent a social construct, and suggested that learning should be regarded as a social as well as an individualistic phenomenon.

5.2, Ideology

Once one considers an individual's thinking and learning processes within a social context, it becomes impossible to ignore the impact of culture and ideology upon these processes. Billig et. al. (1988) explored what they referred to as the dilemmatic aspects of ideology and the consequent social nature of thinking. Central to their debate are the notions of lived and intellectual

ideology. 'Lived ideology' refers to ideology as a society's way of life and includes what passes for common sense within a society. 'Intellectual ideology' is a system of political, religious or philosophical thinking and is the product of intellectuals or professional thinkers.

The notion of lived ideology was characterized by Mannheim:

> 'Here we refer to the ideology of an age or of a concrete historico-social group, e.g. of a class, when we are concerned with the characteristics and composition of the total structure of the mind of this epoch or this group (Mannheim,1960: 49-50, quoted in Billig, 1988: 28).

Thompson (1986:66, in Billig, 1988: 28), suggested that 'The broadest and most inclusive definition of ideology is one which makes it coterminous with culture'. The concepts of lived ideology and culture are similar in that they both reflect the social aspects of everyday thinking. Beliefs, values and cultural practices are integral aspects of this everyday thought.

In contrast to the notion of lived ideology as outlined above, intellectual ideology reflects a formalized philosophy or view of the world. The public expression and sharing of these is a part of their formalization. 'The distinction between lived and intellectual ideology is the difference between a formalized and a non-formalized consciousness' (Billig 1988:28). However the

two are not unrelated. Non-formalized consciousness can be studied and become formalized/intellectualized, and likewise, aspects of intellectual ideology can permeate everyday living and become a part of culture.

Professional education and ideology

Returning to the notion of thinking and learning processes occurring within a social context, it becomes possible to question the impact of lived and intellectual ideology on these processes. This has particular relevance in relation to professional education, such as nurse education, where formal classroom teaching could be construed as the imparting of aspects of intellectual ideology by 'experts', and professional practice experiences in training could be construed as reflecting lived ideology. It must be borne in mind, however, that rigid adherence to this dichotomy ignores the impact of experience on what is formally taught, and the impact of formal teaching on what is experienced.

Two possibilities emerge from the idea of professional education containing aspects of intellectual and lived ideology. One is that students unthinkingly adopt the consciousness which is provided for them, the other that they are active thinkers and meaning makers. An immediate paradox or dilemma presents itself here in that if thinking is construed as individualistic this denies the impact of culture and ideology on the process, but if

culture and ideology shape thinking then thought becomes a social representation, that is to say, a manifestation of an ideology or culture. Fortunately the existence of the dilemma in itself provides a clue to its resolution. Ideologies, whether lived or intellectual, are not always congruent. Incongruities may occur between lived and intellectual ideologies and also within each. Recognition of the dilemmas associated with these incongruities presents the individual with the opportunity for deliberation and thoughtful behaviour. The term 'shared representations' therefore gives credence to the dialectic between these two.

Learning

We therefore live in a world in which unreflective following of routines, and deliberative thought and action may co-exist. Indeed Jarvis (1992) dedicated a whole text to pursuing the theme of 'paradoxes of learning'. He referred to learning as the process of transforming everyday experience into knowledge, skills, attitudes, values, and beliefs. One of the main arguments within the book is that:

> '... learning begins with a fundamental disjuncture between individual biography and the socially constructed experience. This disjuncture leads people to ask questions and thus sets the learning process in motion. ...Individuals can learn from the experience of life or learn to take life's experience for granted. Learning, then, is not straightforward but complex and even contradictory' (Jarvis 1992:4).

5.3, Corporate Constructs

'The kinds of questions people pose for themselves and the conclusions they reach often depend on the forms of thought or specialized techniques available to them' (Balnaves & Caputi, 1993:130-1). These writers use the term 'corporate constructs' to refer to such techniques. They are corporate in the sense that they are the product of numerous individuals, however individuals use the 'corporate constructs' in an individualized way. Balnaves and Caputi (1993) quote Kelly (1955) as hinting at a possible distinction between corporate constructs and personal constructs when he argued that one can:

> distinguish between the personal constructs with which the theory is concerned and the constructs which constitute the approach of the theory itself. The former may or may not be communicated; the latter must be communicated to make public sense. (Kelly 1955, p.130)

A corporate construct depends on language and a public sense.

> 'It is a specialized technique or mode of calculation employed in a site of decision making, whether corporate or individual....corporate constructs do not imply personal constructs, but some personal constructs may be corporate' (Balnaves & Caputi, 1993:132).

Corporate constructs do not necessarily determine the outcome of a person's deliberations although they may have a significant bearing on them since they are likely

to relate to specialized aspects of knowledge and skills. There would, for example, be a large number of corporate constructs associated with the profession of nursing. Some of these would be shared with those used by the lay population but others would be learned during the course of training as areas of specialized skills and knowledge are introduced to students.

The corporate constructs would be used by many nurses but the specific form of their use would be individualistic. However even this individualistic use is likely to be constrained by broader cultural/ideological factors.

Balnaves and Caputi suggested that there is no need 'to assume a holistic rationality in the operation of corporate constructs' (1993:133). This is in keeping with the ideas of Billig et.al. who argued that it is necessary to consider the contradictory themes both between and within lived and intellectual ideology. As suggested above it is the personalized resolution of contradictory themes that retains a personal element to thought and construing.

5.4, Contradiction in Construing

The notion of contradiction is not new within the context of personal construct research. Bassler et al (1992) used a case study approach to demonstrate the possibilities for analysis and interpretation of unbalanced triads of

constructs. They devised a computer programme to identify what they referred to as unbalanced triads of constructs, presenting contradiction, which they equated with conflict, within the construct system. They discussed the relationship between cognitive conflict and success in psychoanalytically orientated psychotherapy.

The above theme is congruent with that which emerged within a study of police stress (Winter, 1993). Winter used a similar approach when he used a correlation test CT (ICARUS, 1989), to assess 'the degree of imbalance or logical inconsistency in relationships between constructs and elements' (Winter 1993, p.259). The implicit assumption in both studies cited above, is that conflict, as represented by imbalance in construct triads, is contraindicated. This assumption fits uncomfortably with the ideas of Balnaves and Caputi, Billig, and Jarvis, which appear to normalize notions of dilemma and disjuncture. This theme will be explored further in relation to the discussion of the results.

The theme of inconsistency also emerged within the work of Argyris and Schon (1974), and Argyris (1993), in which they explored the nature of actionable knowledge, drawing a distinction between espoused theories and theories-in-use. Argyris (1993) differentiated between applicable knowledge and actionable knowledge, suggesting that in order to actualize relevant knowledge, specific and relevant behaviours must be identified and produced.

Behavioural knowledge and skills, are however, likely to represent only one dimension to understanding the gap between espoused theories and theories-in-use, identified by Argyris and Schon. The impact of competing ideologies on professional practice should also be taken into account.

5.5, Integration of Themes

Kelly (1955) suggested that human behaviour could be construed as being shaped by personal constructs. Balnaves and Caputi argued that collective behaviour can be analyzed as if it were regulated by corporate constructs and furthermore that the effects of corporate constructs can be discussed in the same way that one discusses the effects of personal constructs. The notion of corporate constructs can therefore be seen as providing a bridge between personal construct theory and social constructionism. Emergent themes crossing the 'corporate' bridge are those of contradiction, dilemma and paradox arising from the inconsistent nature of ideology. It has been suggested that a person's processes are no less ideologically than psychologically channelized by the ways in which he or she anticipates events (Solas 1992).

It is arguable that the construction of meaning is inevitably ideological since it is an integration of personal, social and corporate dimensions. Billig et. al.

(1988) elaborated this point in relation to health and illness stating that the world of health is not neutral. They suggested that the new health consciousness and associated drive to make people change their behaviour to stay healthy, means that ideological positions are established on the basis of 'what is unhealthy must be bad'. Attempts to control health in this way can put the responsibility for ill health with the individual and leave social conditions untouched.

Illness has the capacity to bring out both compassion and avoidance in others. Constructs to do with health and illness are likely to reflect both individual biography and ideological practices for controlling health and sickness. Nurses are unlikely to be immune to either of these, and their practices are likely to be influenced by a combination of factors including, personal, social and professional dimensions. The formalized taught part of nurse training represents only one aspect of the potential influences on practice, with clinical experience adding yet another major dimension to the possible influences on a nurse's construing of patients and their care.

In summary a number of themes emerge:

- Formal educational experiences are only one aspect of the factors likely to impact on nurses' construing of patients and their care.

- Construing would appear to be influenced by personal, social and corporate factors and also to reflect lived and intellectual ideology.

- Recognition of dilemmatic aspects of ideology (Billig et al. 1988), or fundamental disjuncture between individual biography and socially constructed experience (Jarvis 1992), may trigger deliberative thought and action and provide the basis for learning.

- Contradictory themes are likely to be the norm rather than the exception within personal construing and shared representations.

5.6, The Study

The study outlined in the following chapter represents an attempt to develop a research methodology, which was constructivist in perspective, which would make it possible to:

i) identify salient shared aspects of student nurses' construing of patients and their care

ii) identify differences in the construing of student nurses who have followed different Registered General Nurse curricula, and between these students, and those who have newly registered for training

iii) relate salient aspects of emergent construing to the theoretical perspectives developed in the previous chapters.

Since the study began with a group grid elicitation process, the outcome of which could not be predicted in advance, specific research questions are formulated within the context of the two results chapters. However, broad areas of interest related to similarities and differences between student groups in terms of:

- the ways in which they construed the various nursing activities in which they engaged;

- the ways in which they discriminated between different types of patients, for example between patients suffering from panic attacks, AIDS, and multiple sclerosis;

- those constructs most used to discriminate between nursing activities, and patients;

- the 'complexity' of the systems of construing, and the impact, if any, of length of training upon this.

The following chapter outlines in detail the research method, describing the process of group grid elicitation and all other aspects of the methods used in the study.

CHAPTER 6

Method of Carrying out Empirical Study

6.1, Introduction

This chapter describes how the study was carried out, including details of the research design, the participants, research tools, procedures for implementing the investigation, and methods of data analysis.

The study was carried out in a college of nursing attached to a London teaching hospital. The research participants were all student nurses at different stages of their Registered General Nurse (RGN) training. The dominant patterns of construing manifest by the different student groups were of particular research interest.

Nine different groups of student nurses participated in the study. Four of these were involved at a number of stages of the study, at different points of their training programme. Two of these had followed the 'old curriculum' programme and are referred to as O1 and O2, and two had followed the 'new curriculum' programme and are referred to as N3 and N4. The remaining five groups participated during their first week in the college of nursing and are referred to as C5, C6, C7, C8, and C9. Data from these groups was elicited for purposes of comparison with the more experienced groups. Table 6.1

shows the participating student groups, the grids which they completed, and the timing of completion.

The 'new curriculum', studied by groups N3 and N4, introduced many of the features of the recently published Project 2000 (P2K) recommendations (UKCC 1986) and could in many ways be seen as bridging the gap between a conventional RGN training programme, and implementation of the full recommendations of the Project 2000 document. The introductory course, featuring predominantly school based teaching, was extended from 8 weeks (old curriculum) to 20 weeks (new curriculum). The introduction of P2K saw this extended still further to 18 months, during which time student nurses for the first time had full student status rather than a hands on learning/apprenticeship status.

The emphasis on the more medical aspects of teaching had shifted in the new curriculum programme, which included considerably more teaching of the Social and Behavioural Sciences. An experiential/personal development component was also introduced into the training programme. All of these new inputs were introduced during the students' introductory course, which occurred before their first formal clinical placement, and continued in the study blocks between clinical placements.

Table 6.1
Timetable of participating groups

TIME	OLD CURRICULUM O1	O2	NEW CURRICULUM N3	N4	COMPARISON C5	C6	C7	C8	C9
WEEK 1	-	-	-	-	G1	G1	G1B G2B	G2	G2
8 MONTHS	*	G1	G1	G1					
2 YEARS	G2	G2	G2	G2					
3 YEARS	G1B *	G1B G2B	G1B G2B	G1B G2B					

KEY

G1 and G1B were different versions of the Nursing Activity Grid

G2 and G2B were different versions of the Patient Grid

WEEK 1 - grids completed during first week of nurse training

8 MONTHS) Grids completed in study block following this
2 YEARS) point of training
3 YEARS)

* denotes for practical reasons groups could not complete grids

The research study was designed to enable exploration of student nurses' construing of patients and their care, and the identification of similarities and differences between the groups. The methodology and associated theoretical perspective is derived from Kelly's theory of personal constructs, although as previous chapters have indicated, this has been developed to encompass the notion of shared representations.

Methodology

Careful attention was given to the development of a method appropriate to meeting the aims outlined above. That is to say, a method appropriate to enabling exploration of student nurses' construing of patients and their care and to the identification of similarities and differences between the groups in respect of this construing.

Information regarding an individual's construing can be elicited in a number of ways. It would have been possible to design a questionnaire to collect data on nurses' knowledge, skills and attitudes relating to patients and their nursing care. This would have allowed for the development of a standardized research tool and for group comparisons to be made using scales based on questionnaire responses. However, although interesting data could have been gathered in this way, full acknowledgement could not have been given to the

bipolarity of constructs or the complex interweave of constructs and elements. It was also considered to be a disadvantage that the research tool would have been designed and the questions framed by the researcher without direct input from the participants. Such an approach presupposes that the researcher has a greater knowledge than the participants of those areas of knowledge, skills, attitudes and experience about which information should be gathered and will be perceived as such by the respondents. Frequently this may be a realistic assumption, but in regard to this research this was not considered to be the case. The exploratory work described later in this chapter was considered to be an important part of the research study, it was carried out in a systematic way, and measurement tools in the form of repertory grids were derived from it. The broad areas of interest in this research were identified by the researcher, but many aspects of construing relevant to these were identified by the research participants.

A variety of methods exist for identifying the constructs used by individuals to discriminate amongst people and events, and for identifying those people and events between which they discriminate. The analysis of narratives and stories represents one such approach (Efran, 1994; Neimeyer, 1994; Vogel, 1994).

In relation to this research, the participants could have been invited to talk about their experiences of

nursing. These stories could then have been analyzed and themes relating to patients and their care highlighted. Examples of the students' construing emerging within the context of the narrative could also have been highlighted and discussed. Theoretically it would have been possible to involve students from the old and new curriculum groups and also new students for purposes of comparison with the experienced groups. Such an approach would have been constructivist in perspective, actively involved the research participants, and not involved the use of repertory grids.

A major disadvantage of such an approach is that for purely practical reasons it would not have been possible to involve all of the students in each of the groups and to effectively handle the vast amounts of data that would have been generated. It would also not have been possible to produce a matrix depicting the interrelationships between elements and constructs and their hierarchical structure. After careful consideration it was decided that such a matrix would provide interesting information regarding the interweave of elements and constructs, allowing each to 'find its place in terms of many dimensions of consideration...' (Kelly, 1969b, p119). It was also considered that production of a matrix via the use of repertory grids would facilitate identificaton of dominant group themes and also facilitate the between group comparisons necessary to explore the impact of

curriculum change on the construing of the student nurses.

A number of methods for developing and analysing repertory grids have been described by Fransella and Bannister (1977), all of which have been developed from Kelly's original ideas relating to personal construct theory and repertory grid techniques. Fransella and Bannister (1977, p.3) drew a distinction between the idiographic map of a construct system and the 'nomothetic cartography of the semantic differential (Osgood et al., 1957)'. They suggested that 'the grid is perhaps best looked on as a particular form of structured interview' (Fransella and Bannister, 1977, p.4).

In relation to the research outlined in the remainder of this chapter the goal was to develop grids which would have meaning to all research participants, which would allow for an exploration of their construing of patients and their care, but which would also allow for between group comparisons to be made. The primary focus of the research was not on individual construing but on identifying the dominant themes emerging within groups. Having identified these dominant themes the intention was not to compare these with the construing of individuals within groups but to make between group comparisons, with the key variable being the curriculum studied.

A number of different repertory grids were used as research tools in this study. Some of these were elicited from the student groups, others were developed elsewhere and given to the students to complete. All grids, however, fall into one of two general categories: one headed 'nursing activity' grids, and the other 'patient grids'. Between them, these two types of grid tapped into construing relating to both patients and their nursing care.

The following sections outline the method used in respect of grids 1 and 1B, both 'nursing activity' grids, and grids 2 and 2B, both 'patient grids'. The final section outlines the methods used to analyze the grid data. These methods were developed specifically to meet the goals outlined above, that is to say, to facilitate the identification of dominant patterns of construing and to make between group comparisons possible.

6.2, Nursing activity grids 1 & 1B

Design

This part of the research was designed to allow investigation of student nurses' construing of a range of nursing activities in which they had recently been engaged (old and new curriculum students) or anticipated being involved (comparison groups). The dominant construct patterns of the different groups, as well as

comparisons between the groups, were of particular interest.

6.2.1, Nursing Activity Grid 1

This grid was developed separately with each of the groups participating in this part of the research, therefore several similar but different grids emerged. Each of the grids used nursing activities as the elements, and the constructs all related to these. A group method of element and construct elicitation was used and only those which had meaning for all group members were included in the final grid.

Participants

Five different student groups participated in the generation and completion of Grid 1, thereby producing five similar but slightly different versions of this grid (labelled nursing activity grids 1i-1v). The five groups comprised one old curriculum group (O2), two new curriculum groups (N3 and N4), and two comparison groups (C5 and C6). Table 6.2 lists the groups which participated in the generation and completion of grids 1i to 1v, the number of students within each group, and the stage of training at which the grid was completed.

Table 6.2

Nursing Activity Grid 1, participating groups

grid label	*participating group*	*no. of stds.*	*time*
1i	O2	24	8 mths
1ii	N3	30	8 mths
1iii	N4	26	8 mths
1iv	C5	41	week 1
1v	C6	39	week 1

Ideally two old curriculum groups would have been involved at this stage but when the research commenced one of these groups (O1), had already passed the stage of training at which the other groups completed this grid. This group was, however, involved in later stages of the research.

The old and new curriculum groups generated and completed the grid approximately eight months into their three year training programme, during a study block which immediately followed a clinical placement. The comparison groups generated and completed the grid during their first week in the college of nursing and before they had any formal teaching input.

Research tool/grid used

As described above, the grid used for each group was elicited from that group, hence five different but surprisingly similar nursing activity grids emerged. See Appendices 1 to 5 for details of elements and constructs contained within each grid.

Procedure

The elicitation of elements and constructs from each group was a fairly lengthy procedure requiring the minimum of a half day with each group. The same process was engaged in with each group.

It was explained to each group at the start of the procedure that the researcher was interested in investigating their attitudes to the nursing activities they were either engaged in during their clinical placement (old and new curriculum students), or anticipated being engaged in when they started their clinical practice (comparison groups). Students were asked if they objected to participating in the investigation and none did. They were also given a consent form to sign.

Process of elicitation

Having explained to students the nature of the research study, and given them the opportunity to leave if they preferred, the process of group element and construct elicitation commenced.

Element elicitation

Students were asked to write down three nursing activities which they had experienced during the previous practical placement (new and old curriculum groups), or expected to experience when they commenced practical placements (comparison groups). The term 'experienced' referred to activities they had participated in, observed or witnessed, or expected to, in the case of comparison groups.

Students were then asked to share these activities with the rest of the group and detailed notes were made by the researcher. Activities frequently repeated themselves but attention was paid to ensuring that all listed activities were voiced. Listing of activities, rather than just calling them out, was useful with a fairly large group to ensure that all students were actively involved, and by asking whether any student had written down anything that had not so far been stated by others gave the quieter students a chance to contribute.

Once all of the listed activities had been voiced, students were asked to consider whether they had experienced, or expected to experience in the case of the comparison groups, any others not so far identified. By this stage students were usually relaxed and enjoying the activity and a number of new activities would be contributed.

Once it reached the stage that no new activities were emerging the researcher's notes were shared with the student group. At this stage the list of activities would be very long but a number of activities would have been repeated using different wording and also many activities could be subsumed under more general headings. The size of the list was therefore reduced but what remained reflected the original list of activities. However, it was important that the final list was understood by, and had meaning for, all of the students in the group.

The final list of nursing activities became the **elements** of the nursing activity grid. Each element was numbered and written on a separate large sheet of paper, in preparation, usually after a short break, for the stage of construct elicitation.

Construct elicitation

Construct elicitation again involved all students in the group. The first three elements were shown to the group and students were asked to identify a way in which they saw two as being similar and different to the third. It was explained to students that their personal view was required and that they should write down their ideas. Students were then asked to share their perspectives with the group and the emerging constructs were recorded by the researcher. As a result of the large number of individuals involved in this activity many different constructs emerged for each triad of elements. Where either the researcher or students in the group did not understand the perspective/construct being presented by a student, clarifying discussion would ensue.

This process continued until each element had been included in at least one set of triads and no new constructs were emerging. Very early on in the process constructs started to repeat themselves but to ensure that as many relevant constructs as possible emerged the exercise ended with students being asked to think generally about the elements and note any additional similarities and differences that occurred to them.

As it had with the element elicitation process, a very long list emerged, but again a number of ideas had been voiced using different wording. The long list was shared

with the group and a number of items were subsumed under one construct label. It was very important at this stage that the construct labels used were understood by each member of the group. This did not mean, however, that the exact nature of their use was shared.

Very early on in the process of elicitation students discovered that they might share a construct, but not the nature of its application in relation to specific elements. Students needed reassurance during the process of construct elicitation that although the constructs included in the final grid should have meaning to each student, they did not have to agree on their application, and that individual completion of the group generated grid would allow for expression of these differences.

The final list of constructs for inclusion in the grid was checked with the group prior to ending the elicitation phase. The final grid was drawn up by the researcher, and on a separate occasion, usually the next day or as soon thereafter as possible, the researcher re-met with the group for grid completion.

Grid completion

One hour was usually sufficient for this phase. Each student was given a copy of the grid and a check was made that students were still happy with the elements and constructs included in it. Students were then asked to

complete the grid in a way that reflected how they personally viewed the relationship of the elements to the constructs. Detailed instructions were given on how to rate each element in relation to each construct using a one to five rating scale. Students were instructed that if they were unable to rate any construct/element relationship they should leave a blank. No personal details were required on the grid other than the date of completion and the name of the student group to which the student belonged. It was explained that it was not the intention to identify any specific individual's construing in the research, but that between group comparisons would be made.

Grid 1. Instructions for students

The grid was given to each member of the group for completion. An introduction and instructions were given as follows:

General introduction

> This grid comprises elements and constructs which have emerged during our group discussions and relate to your recent/anticipated clinical placements. The elements are all activities which occurred/are likely to occur on your ward, and to which you can all, in an individualized way, relate.

The constructs on this grid can all be related to the elements. Recalling your recent/anticipated clinical placements, I would like you to make a personal rating of the degree to which each construct applies to each element.

Specific instructions

1. Please read element 1.
2. Now read construct one, and rate on a 1 - 5 scale the degree to which construct 1 applies to element 1

The extreme of the construct listed on the left receives 1 and the extreme of the construct listed on the right receives 5. 1 indicates that the construct could not apply more, and 5 indicates that the construct could not apply less.

3. When you have rated element 1 in relation to construct 1, continue by rating each element in relation to each construct.

All students were given the same introduction and instructions. They were reminded periodically to ensure that the extreme of the construct on the left was given a rating of 1, and the extreme of the dimension on the right was given a 5. They were also asked to check their grid for this once they had completed the whole grid.

Completed grids were then collected for analysis by the researcher.

General Comments

The process of group grid elicitation was lengthy and required the support of the nurse tutors. A considerable number of timetabled hours were required at very specific points of the students' training. It also relied on the willing cooperation of the students involved. It was considered very important that the students were willing participants and that they did not feel judged during the process of element and construct elicitation or on completion of the final grids.

The researcher required interactive classroom skills and the ability to involve students, in a non-threatening way, in a lengthy group experiential activity in which students were willing participants. Considerable practice in group grid elicitation was required before embarking on this particular research activity.

6.2.2, Nursing Activity Grid 1B

This grid was again a nursing activity grid but was developed by the researcher from the five elicited nursing activity grids outlined above. Each group that completed this grid completed, therefore, exactly the

same grid in terms of elements and constructs included. Between group comparison was thus facilitated.

Participants

This grid was completed by groups O1 and O2 (old curriculum), and N3 and N4 (new curriculum), in the final study block at the end of their training; and one comparison group (C7), during its first week in the college of nursing. Table 6.3 lists the groups which participated in the completion of grid 1B, the number of students within each group, and identifies the point of training in which the grid was completed.

Table 6.3

Nursing Activity Grid 1B, participating groups

grid label	*participating group*	*no. of stds.*	*time*
1Bi	O1	19	3 yrs
1Bi	O2	18	3 yrs
1Bi	N3	35	3 yrs
1Bi	N4	10	3 yrs
1Bii	C7	24	week 1

Research tool/grid used

As described above, although five different grids were elicited from the student groups participating in grid 1, these grids also had a lot in common in terms of the

elements and constructs which emerged. In order to facilitate group comparisons at the end of training, common features of grids 1i - 1v were combined into one grid labelled grid 1Bi, which was then given to the two old, and two new curriculum student groups at the end of their training. A second version of this grid, labelled 1Bii, was developed for the comparison group which reflected the anticipatory nature of this group's construing. Appendices 6 to 7 list the elements and constructs included in grids 1Bi and 1Bii.

Procedure

The old and new curriculum students were familiar with completing grids by the time that they were presented with grid 1B. It was explained to them how the grid was derived and they were again asked if they were happy to participate in the research. All students remained and completed the grid. Instructions were again given on how to complete the grid, giving a rating on a scale of one to five for each construct in relation to each element, and leaving a blank if, for any reason, it was impossible to make a rating.

Comparison students, who would not have been involved in earlier stages of the research, had a fuller explanation on the purpose of the research, and their consent to participate was obtained. These students were then given full instructions on how to complete the grid.

6.3, Patient Grids 2 and 2B

6.3.1, Patient Grid 2

Grid two was developed to allow investigation of the specific ways in which nurses construed different types of patients. The grid given to the research groups for completion was already prepared rather than elicited from these groups. The grid shared features of a grid developed by Wilkinson (1982) and previously used by Watts (1988), although it also contained many features unique to this research. A copy of those elements and constructs included in the grid is provided in Appendix 8.

Participants

Grid 2 was completed by the two old curriculum and two new curriculum research groups (O1,O2,N3,N4), and also by two comparison groups (C8,C9). The old and new curriculum groups each completed the grid during the study block nearest to the completion of two years of training. The comparison groups completed it during their first week in the college of nursing and before receiving any formal teaching. Table 6.4 lists the groups which completed grid 2, the number of students in each group, and the stage of training at which the grid was completed.

Table 6.4

Patient Grid 2, participating groups

grid label	*participating group*	*no. of stds.*	*time*
2	O1	19	2 yrs
2	O2	22	2 yrs
2	N3	38	2 yrs
2	N4	35	2 yrs
2	C8	44	week 1
2	C9	37	week 1

Tool/grid used

The grid used for this part of the research comprised 12 'patient' elements and 21 constructs. A number of the constructs were very similar to those developed by Wilkinson (1982). These constructs are marked with a * on the list of grid 2 elements and constructs provided in the appendix.

The elements and constructs appearing in grid 2 represent the combination of aspects of work with different student groups over a two year period. None of the formal groups involved in this study participated in the process at this stage. Final responsibility for the elements and constructs appearing in grid 2 lies with the researcher. The following description provides an example of the type of activity which played a part in generating grid 2.

In a social psychology class, second year psychology undergraduates were asked for examples of ill-health. They initially supplied a range of examples of physical disorder such as heart disease and pneumonia, and then moved on to include a number of psychological conditions. The examples provided by students were then used to elicit constructs, using the triadic method outlined in section one above.

On another occasion qualified general nurses studying a continuing education course were asked for examples of ill-health. A range of largely physical conditions were presented. Triadic construct elicitation was again engaged in.

This type of activity was engaged in with a number of different groups of students. Examples of physical ill-health tended to be given in the first instance with examples of psychological problems following these. The types of constructs which emerged are reflected in those appearing in grid 2. However, the actual wording of the constructs is the researcher's. The first draft of the grid was given to a group of Masters level health students for comment and feedback, following which a few minor alterations were made.

Grid 2 was developed in this way for several reasons. The use of a standard grid for all groups made between group

comparisons easier. The amount of time involved in following the same procedure as for grids 1 and 1B, in which grids were independently elicited from each group and analysed and then a standard grid derived and given to all groups, was prohibitive. All of the time spent with students came within their timetabled teaching programme and increasing the time spent could not be justified when acceptable alternatives were available.

Experience of using the grid devised by Wilkinson (1982), in which patients comprised the elements, indicated that a modified version of this would provide interesting information about student nurses' construing of different types of patients.

Elements and Constructs

The case examples (elements) in Grid 2 were selected to include physical ill-health (eg.pneumonia), psychological ill-health (eg.panic attacks), and combinations of the two (eg.anorexia nervosa). The constructs could be related to each of the elements. The wording for both elements and constructs was carefully selected so that it was not too specialized or technical to have meaning for students in their first week of training.

Constructs related to:

1) responsibility for/cause of ill-health (for example 'this person is very likely to be responsible for their disorder', 'Stress is likely to have played a part in the cause of this');

2) care and treatment (for example 'is very likely nurses can do a lot to help this person', 'is very likely a lot can be done to help this person')

3) personal attributes of the ill-person (for example 'is very likely this person could make sensible decisions about their care and treatment')

4) self in relation to the ill person, ('I could be like this', 'I would enjoy nursing this person')

Procedure

The new and old curriculum students were seen during the study block nearest to the point at which they completed two years of training. The comparison groups were seen during their first week in the college of nursing and before the commencement of any formal teaching. Students were given information on the nature of the study and asked if they objected to participating. None did.

Each student was given a copy of the grid and the elements and constructs were read through slowly with the group. Students were then given instructions on how to complete the grid, rating each construct in terms of its relationship with each element, using a 1 - 5 rating scale as outlined in section one. Students were asked to leave a blank if any construct/element relationships were impossible for them to rate. It was explained to students that completion of the grid did not represent a test and that there were no right or wrong answers. It was also explained that it was their personal view that was required rather than their neighbours, or what they thought might be an expected view.

Students were advised that the only personal information required on the grid was their intake date and the date of completion. Personal identification of responses was not, therefore, possible.

6.3.2, Patient Grid - 2B

Grid 2B was derived from Grid 2 but represented a shorter version, tapping into the key features of Grid 2. Grid two had taken slightly over an hour for most students to complete, and added to this was the time spent in pre-completion explanations. The researcher therefore decided to produce a shorter version to give to students at the end of the three years of training, or for comparison groups, in the first week in the college of nursing.

Provision of a shorter version was considered particularly important in respect of the core research groups (old and new curriculum students) who had already spent a considerable number of timetabled hours producing and completing grids.

In spite of being a smaller grid, Grid 2B was considered important since it allowed for the reinforcement, or otherwise, of key aspects of construing emerging in Grid 2, and also complemented aspects of construing identified in Grid 1

Participants

Grid 2B was completed by one old curriculum group and two new curriculum groups at the end of three years of RGN training (O2,N3,N4) and also by one comparison group (C7) in their first week in the college of nursing.

Table 6.5

Patient Grid 2B Participating Groups

grid label	*participating group*	*no. of stds.*	*time*
2Bi	O2	18	3 years
2Bi	N3	35	3 years
2Bi	N4	10	3 years
2Bii	C7	24	week 1

Tool/grid used

As described above Grid 2B was derived from Grid 2 and included eight elements and nine constructs. The elements still reflected examples of ill-health but had been changed to simple labels rather than reflecting people (for example, 'a 30 year old person suffering from panic attacks associated with travelling' had been changed to 'panic attacks').

The constructs in Grid 2B reflected aspects of construing represented in the original Grid 2 (for example,'I enjoy nursing people with this'), as well as some aspects emerging from the patient grids (for example, 'communication is an important part of this nursing care'). Grid 2B, therefore, facilitated links being made between the construing occurring in Grids 1 and 1B (nursing activity grids) and Grid 2 (patient grid).

Grid 2B was adapted slightly to make it relevant for the comparison group who had not commenced formal nurse training. For example construct one, 'I enjoy nursing people with this', became 'I anticipate enjoying nursing people with this'. The research therefore comprised grids labelled Grid 2Bi (completed by old and new curriculum students), and Grid 2Bii (completed by comparison group). Appendices 8 and 9 provide details of the elements and constructs included in Grids 2Bi and 2Bii.

Procedure

The procedure for completion of Grids 2Bi and 2Bii was exactly the same as for Grid 2. However, students found 2B Grids easier to complete as they were shorter. Also the researchers observations were that using simple labels for the elements, rather than 'people' labels, appeared to make it easier for the participants to make decisions in respect of the applicability of constructs. (This represents a potential further research study in itself).

6.4, Summary of participating groups and grids used

Ten groups of student nurses participated in the research study which ran over a period of three and one half years. Several of these (the core groups) were involved on several occasions during their training, whilst the comparison groups participated on one occasion, with the exception of C7 which completed both grids 1B and 2B. As a reminder, Table 6.1 located near the start of this chapter provides a timetable of all participating groups.

6.5, Methods of Data Analysis

The study outlined in the previous two chapters was designed to allow exploration of student nurses construing of patients and their care. The primary interest was with the dominant patterns of construing

manifest by a group rather than in an individual's construct system. Identification of dominant group themes and similarities and differences between the groups was of specific interest. It was decided, therefore, that rather than analyzing individual grids it would be useful to devise a method of producing an average group grid for each set of grids, which reflected the dominant themes contained within the individual grids.

Sets of completed grids, that is to say those produced by a particular group, were averaged using a grid average programme (Hampton, 1990). This programme produced a group grid by finding the mean across subjects for each cell in the grid. This programme also calculated the root mean variance for a particular set of grids, thereby allowing for the estimation of the standard error of means for each average grid. Had the standard error of means indicated that the group grids were not meaningfully representative of the individual grids within the group, alternative methods of analysis would have been considered. However, this did not prove to be necessary (see tables 7.1 - 7.6, 7.7 - 7.11, 8.1 - 8.6, and 8.10 - 8.13 for the standard error of means for each group grid).*

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* Further evidence of the reliability of the group means in each grid is seen in the high level of correlation between the grid means across groups who had followed the same curriculum (see tables 7.12, 8.7, and 8.14).

Having produced an average grid for each set of group grids further exploration utilized the GAB computer programme (Higginbotham and Bannister 1981). This programme can only accommodate whole numbers, but the production of a 'group grid' resulted in many non whole numbers between 1 - 5 within the grid cells. Rounding up to the nearest whole number would have resulted in the loss of considerable discrimination amongst ratings, therefore, each number was multiplied by 10 and then rounded to the nearest whole number. The average grids were then analyzed with the aid of the GAB programme.

6.5.1, Grid Analysis for Beginners (GAB)

In spite of its title, the GAB programme, rather than being elementary, can be used as the basis for elaborate analysis of grid data. The assumption underlying grid method is that each act of judgement that a person makes, either consciously or not, represents an implicit theory (a construct system) covering the realm of events within which the judgement was made. Repertory grid methods are a way of exploring the structure and content of such implicit theories. They provide a mathematical solution to the problem of identifying patterns within complex systems of construing. They are based on the assumption that it is possible to identify conceptual links between a persons's ideas by noting statistical associations between acts of judgements (Higginbotham and Bannister, 1981).

The GAB aims to be 'simple and open-ended'. It provides data on the relationships between constructs and the relationships between elements. It also gives an indication of the importance (in terms of variance accounted for) of constructs and elements, and a sketch of their linkage pattern. Higginbotham and Bannister (1981) suggested that by limiting the computer output in the way that they had, the onus was on the researcher to devise further measures relating to the specific questions they are asking, using the basic data produced by the GAB.

Within this particular study the GAB was used to identify ways in which, within a 'group grid', constructs were used to differentiate among elements, and also to identify the patterns of intercorrelations among constructs. The importance of particular constructs, in terms of variance accounted for, is also identified.

It must be noted, however, that the analysis provided by the GAB programme does not represent a set of 'scores' equivalent to those produced by a standard psychological test. The statistical aspects of the analysis must therefore be treated with caution and indicative of general trends rather than absolute relationships.

Although GAB identifies relationships between constructs and between elements, in a number of ways it is limited in terms of the analysis provided. GAB analysis does not tease out the specific ways in which one element is like another, for example, element 1 may be like element 4 in respect of attributes x,y and z but not in respect of attributes a,b and c. The picture generated by the GAB analysis was therefore taken further via the application of a form of hierarchical classification (HICLAS).

6.5.2, HICLAS

Hiclas is the name given to a method of data analysis which simultaneously structures objects in terms of

related attributes, producing a hierarchical order of classification in terms of supersets and subsets of both objects and attributes. HICLAS generates an integrated graphical representation of both object and attribute hierarchies. It is based on a categorical model proposed by De Boeck and Rosenberg (1988), and is outlined in detail by De Boeck, Rosenberg and Van Mechelen (1993).

Two important features of the model are that it is binary, and also that it is not probabalistic, meaning it does not specify a probability distribution of data. The hierarchical classes model was originated in the field of social perception but can be applied to all kinds of binary matrices in which objects have a relationship with specific attributes. In this particular piece of research the elements form the objects, and the constructs form the attributes. The constructs are bipolar, for example, 'I would enjoy/I would not enjoy', and although the grids were all completed using a 1-5 rating scale, this was converted to binary form.

A more detailed explanation of HICLAS will be given in the context of analyzing the data in chapter 7.

6.5.3, Unrotated Principal Components Analysis and Between Grid Correlations

Between grid correlations were carried out for each set of group grids, and correlation matrices produced. A

'set' of group grids refers to those grids within each of the four main groupings, that is to say, Grid 1, Grid 1B, Grid 2 and Grid 2B.

Average grids within a particular set were compared in pairs using Unrotated Principal Components Analysis, with the two groups as variables and the grid cells as cases. Differences between the groups were shown on factor two, and those cells with factor scores differing by more than 2 were considered indicative of the cells in the grids which differed most between the groups.

A detailed explanation of all of the methods used is given in chapter 7 in the context of the data analysis.

Summary of Methods Used

The methods outlined above allowed for the inductive exploration of student nurses' representations of health and illness, and in particular their perceptions of patients and their care. It also enabled exploration of the impact, if any, of general nurse training upon these perceptions. The results of the exploration can be considered in the light of existing theoretical and applied literature, thereby allowing for the formulation of new perspectives where these are appropriate.

CHAPTER 7

Results: Nursing Activity Grids

7.1 Analysis of Nursing Activity Grid I

Nursing Activity Grid I was completed by five groups of student nurses. One old curriculum group (group O2), two new curriculum groups (groups N3 and N4) and two comparison groups (groups C5 and C6). Groups O2, N3 and N4 completed the grid during a study block, after approximately eight months of student nurse training. Groups C5 and C6, completed the grid during their first week in the college of nursing, before any formal training had commenced. It was only possible to include one old curriculum group at this stage of the study as the only other group had already passed the eighth month of training when the study began. This group was, however, included in later stages of the study. The time-table of participating student groups can be seen in Table 6.1.

There were five different versions of grid I as the elements and constructs for this grid were elicited separately with each of the participating groups. Grids were then completed individually by students in the group. The order in which elements and constructs are listed in each grid was determined by the researcher, and selected for ease of comparison between grids. These can

be found in abbreviated form in Tables 7.1 to 7.5 and in full in Appendices 1 to 5.

Nursing Activity Grids Ii - Iv were analysed in relation to the following broad questions of interest:

1. What 'nursing activity' elements and related constructs were generated by the different groups to reflect aspects of their recent, or anticipated, clinical experience, and how did the groups differ in this respect?

2. Which constructs contributed most to the overall variance within the grids? What proportion of the overall variance was accounted for by component I constructs? Were there similarities and differences between the groups in respect of these?

3. What does the GAB analysis tell us about the issues of feeling prepared and evaluating nursing activities and were there differences between the groups which could be linked to the increased psychosocial emphasis in the new curriculum?

Similarities and differences between the groups

In relation to the elicitation process it was expected that:

- There would be considerable similarity between the groups with experience, in respect of the nursing activity elements and related constructs selected for inclusion in the grid. These groups had all had several months of nursing practice experience within the same clinical environment. It was expected that the comparison groups' grids would show greater difference since the groups were newly formed and they had no shared nursing experience.

In relation to analysis of completed grids it was expected that:

- the two comparison groups would be less alike than the three groups with experience, and also that differences would exist between the old curriculum group and the two new curriculum groups in respect of those activities for which they felt well prepared and valued highly. It was hypothesized that the new curriculum group, which had experienced a greater emphasis in their training on 'social and psychological' aspects of care, would feel better prepared for activities requiring related knowledge and skills, and also that they would value these more highly. It was also expected that they would

enjoy and not feel stressed, doing those activities for which they felt well prepared.

In relation to contribution to variance it was expected that:

- Component I constructs would contribute less to the grids' variance for those groups with experience than for the comparison groups. This was based on the assumption that experience of nursing would have the effect of increasing the students' abilities to use a range of constructs in a flexible way to discriminate amongst nursing activity elements.

Average Grids

Individually completed grids for each group were averaged, and one representative grid produced for each group.

Average group grids were derived by calculating the mean rating score for each cell on each of grids 1i - 1v, taking account of each student's ratings within the group. The root mean variance was calculated for each group grid, and also the average standard error of means. These scores are recorded beneath the raw data for each group grid, in Tables 7.1 to 7.5. (As a rule of thumb, the cell means in the averaged grid would have a 95% confidence interval of ± 2 standard errors)

The standard error of means for the nursing activity grids 1i-1v ranged from 0.17 to 0.21.

GAB Analysis

Each average 'nursing activity' grid was analysed with the aid of the GAB computer programme (Higginbotham & Bannister 1983). GAB listed constructs in order of their contribution to the total variance, that is they were listed in terms of their summed relationship scores. This list reflected the order of 'importance' of constructs if it is assumed that importance, or centrality of constructs is indicated by high correlations with other constructs. Constructs in order of contribution to variance, are listed in Tables 7.1 to 7.5.

GAB also organized constructs into 'components'. This was achieved by taking the construct accounting for the greatest variance and identifying this as the central construct of 'component' I. All constructs which are related to this at the 5% level (two tailed) or higher, are included in component I.

The construct which accounted for the next highest variance but which was *not* significantly related to the central construct of component I, was identified as the central construct of component II. All constructs which are significantly related to this construct are included

in component II. The GAB programme continued this process until all constructs were listed, however only components I and II are reported in this study since it is these constructs which are most used to discriminate between the nursing activity elements.

Tables 7.1 to 7.5 list the constructs used in each grid and indicate where these are included in components I and II. The central construct of each component is also identified.

The contribution to variance of component I in each grid was calculated and has also been recorded in Tables 7.1 to 7.5. A high contribution to variance by component I constructs indicates that constructs not in this component do not strongly discriminate amongst the elements. A component I contribution to variance of 80%, for example, demonstrates that only 20% of a grid's variance is accounted for by the remaining constructs. A construct system in which a high percentage of a grid's variance is accounted for by component I could be considered analogous to that described by Bieri as a simple, or undifferentiated, system.

GAB was used to carry out the same type of analysis on elements as for constructs. Elements were listed in order of their contribution to variance, and were also organized into components. The elements applying to each group grid are listed in Tables 7.1 to 7.5, the order of

their contribution to variance is listed, and inclusion in the first two components is identified. However, the most interesting results relating to Grid 1 analysis are found via the exploration of the interrelationship of constructs, and the relationship of constructs with elements as depicted by the ratings recorded in each cell of the grid.

The inclusion of the average data for each group grid, Tables 7.1 to 7.5, allows the reader to identify a group's average construct rating in respect of each nursing activity element.

Table 7.1
Group O2, 'Nursing Activity' Grid 1i

	Elements											
	1	2	3	4	5	6	7	8	9	10	11	12
C1	1.1	1.9	1	2.4	4.1	1.5	3.2	3.9	2.2	3.1	2.7	1.9
C2	2.1	2.7	2.2	1	2.2	3.9	1.1	1.5	1.1	1.2	1.9	2.2
C3	3	3.2	3.6.	2.3	4.9	3.8	2.3	2.7	2.4	2.5	1.5	1.8
C4	2	2.8	1.7	2.2	4.6	1.1	3.5	3.4	3.6	2.6	3.1	2.
C5	3.7	1.0	3.9	3.9	2.2	4.6	2.1	1.4	2.3	3.8	2	4
C6	2.5	4	2.9	3.1	3.9	3.5	2.3	2	2.3	2.1	3.3	2.0
C7	4.3	3.7	4.5	4.2	1.4	4.2	3.5	3.5	2.6	4	3.4	4.1
C8	1.5	3.4	1.7	2.7	4.4	2.4	3.7	3.7	3.8	3.4	2.7	2.3
C9	1.1	1.7	1.2	1.2	2	4.7	1.2	4.2	1.2	1.6	1.3	3.5
C10	3.8	3.4	4.3	2.8	3.4	4.8	1.7	3	1.5	1.8	2.7	3.7
C11	2.6	2.1	1.2	3.2	3.4	4.7	3.1	3.1	3.4	4.1	1.3	3.6
C12	4.9	4.6	4.8	4.5	2.7	4.3	2.5	2.5	2.9	2.2	3.7	2.4
C13	2.5	2.4	2.9	2.5	3.1	4.8	1.9	2.6	1.9	1.9	1.5	1.5
C14	2.7	1.8	2.5	2.6	2.7	3.7	2.4	2.4	2.3	3.3	1.7	2.4

N = 24
Average standard deviation (root mean variance) 1.034
Average standard error of means 0.21
C = construct
See Appendix 1 for full list of grid 1i elements & constructs
Note: 1 = positive pole 5 = negative pole

Constructs	Components I	Components II
1. I did frequently/did not	+	
2. communication important/not		+
3. enjoyed/did not		+
4. simple/difficult	*	
5. trained staff did frequently/did not	-	
6. limited by time constraints/not		
7. stressful/not	-	
8. well prepared/not	+	
9. patient centred/not		
10. required thought/did not	-	+
11. used taught skills/personal skills		
12. optional/not		
13. highly valued by me/not		*
14. highly valued by trained staff/not		+

Contribution to variance of component I constructs = 53%
Constructs in order of contribution to variance
4,8,10,1,13,2,12,7,5,14,3,11,6,9

* denotes principal construct in component
+ denotes correlates positively with principal construct
- denotes correlates negatively with principal construct

Elements	Components I	Components II
1. maintaining hygiene & comfort	*	
2. giving medication		
3. physical observations	+	
4. admissions	+	
5. dealing with death		
6. fetching and carrying		-
7. health education		*
8. teaching colleagues		
9. psychological care		+
10. rehabilitation		+
11. technical procedures		
12. learning through observing		

Elements in order of contribution to variance
1,7,4,3,9,6,11,10,5,2,12,8

* denotes principal element in component
+ denotes correlates positively with principal element
- denotes correlates negatively with principal element

Table 7.2
Group N3, 'Nursing Activity' Grid 1ii

	Elements												
	1	2	3	4	5	6	7	8	9	10	11	12	13
C1	1.3	2.3	1.1	2.7	2.8	4.4	2.2	3.4	2.6	1.4	1.9	1.2	3.2
C2	1.4	2.4	2.4	1.0	1.7	4.3	4.0	1.0	1.8	1.1	2.7	1	1.3
C3	2.1	2.2	3.1	1.7	2.1	4.4	4	2.2	1.4	2.8	2.6	1.1	2.1
C4	1.7	2.2	1.3	2.1	2.9	3.8	1.3	3.0	2.5	2.6	2.2	1.3	3
C5	2.7	1.3	3.1	2.9	2.2	1.8	4.5	1.9	1.7	1.5	1.9	2.4	2.0
C6	4.4	4.2	4.6	4.1	3.5	2.9	4.2	3.4	3.4	2.6	3.9	4.5	3.4
C7	1.4	2.4	1.5	3.7	4.1	4.7	3.1	3.6	3.2	3.7	2.2	1.9	3.4
C8	1.6	1.5	2.5	2.7	3	3	4.1	2.1	1.4	3.5	2.3	1.1	1.7
C9	3.4	1.2	3.7	3.9	3.4	2.2	4	3.7	2.6	2.4	3.2	3.8	4
C10	1.8	4.1	2.1	2.8	2.5	3.9	3.5	2.3	2.8	3.2	2.2	1.1	1.9
C11	4.6	4.4	4.9	4.4	4.1	2.2	4.4	2.6	3.6	4.7	3.8	2.3	2.3
C12	1.3	1.7	1.3	1.7	2.3	3.1	1.5	2.7	2.4	2.5	2.0	1.4	2.7
C13	1.4	1.8	2.4	1.8	1.8	2.8	4.1	1.8	1.8	2.5	2.1	1.1	1.5
C14	2.2	1.5	2.3	2	2	2.6	3.6	2.1	1.6	1.5	2	2.1	2.2

N = 30
Average standard deviation (root mean variance) 0.9794
Average standard error of means 0.18
C = construct
See Appendix 2 for full list of grid 1ii elements & constructs
Note: 1 = positive pole 5 = negative pole

Constructs	Components I	Components II
1. I did frequently/did not	+	
2. communication important/not		+
3. enjoyed/did not		+
4. simple/difficult	*	
5. trained staff did frequently/did not	-	
6. stressful/not	-	
7. well prepared/not	+	
8. perceived by patient as important/not		+
9. adequately supervised/not		
10. self motivated/not		+
11. optional/not		
12. able to cope/not	+	
13. highly valued by me/not		*
14. highly valued by trained staff/not		+

Contribution to variance of component I constructs = 51%
Constructs in order of contribution to variance
4,12,7,13,6,1,3,5,8,14,10,2,9,11

* denotes principal construct in component
+ correlates positively with principal construct
- denotes correlates negatively with principal construct

Elements	Components I	Components II
1. maintaining hygiene & comfort	+	
2. giving medication		*
3. physical observations	+	
4. admissions	*	
5. assessing patient	+	
6. laying patient out		
7. non-nursing duties		
8. teaching patient	+	
9. technical procedures	+	+
10. hand-over report		
11. maintaining safe environment	+	+
12. talking to patients	+	
13. helping patients cope with stress	+	

Elements in order of contribution to variance
4,1,5,11,3,9,12,8,13,2,10,7,6

* denotes principal element in component
+ denotes positive correlation with principal element
–

Table 7.3
Group N4, 'Nursing Activity' Grid 1iii

	Elements											
	1	2	3	4	5	6	7	8	9	10	11	12
C1	1.3	1.9	1.5	2.7	4.4	2.2	3.3	2.7	1.6	1.5	1.4	1.7
C2	1.3	2.1	2.4	1	3.2	3.8	1.3	1.8	3.3	2	1.1	1.2
C3	2	2.4	2.9	2.5	4.2	4	2.5	1.6	3.1	2.6	1.5	2.2
C4	3	1.5	2.1	3	2.8	4.6	1.8	1.5	2.7	2.6	3.0	3.0
C5	1.3	1.2	1.3	1.3	1.7	4.6	1.3	1.2	3.5	1.8	1.3	1.4
C6	3.1	1.1	1.9	2.3	1.7	4.6	3.4	1.2	2.8	3.4	4.5	4.4
C7	2.5	1.4	3.5	4.1	4.2	4.4	3.3	1.6	4.1	1.7	3.1	3
C8	2.1	2.4	2	2.8	3.3	1.5	3.4	3.1	2.6	2.5	2.1	2.6
C9	4	3.9	4.3	3.6	1.9	4.5	3.2	2.6	3.9	3.8	3.8	3.5
C10	1.5	2.4	2.9	2.9	3	4.3	2.2	1.5	3.7	2.1	1.5	1.5
C11	1.3	1.1	1.9	3.2	4.7	4.2	1.6	1.4	3.6	1.6	1.5	1.4
C12	1.6	2.1	3	2.6	2.2	4.4	2.1	1.6	3.1	1.9	1.5	1.5
C13	2	1.5	2.3	2.1	2.2	4.1	2.1	1.4	2.3	1.8	2.1	2
C14	2.6	1.3	2.7	2.8	2.6	4.3	2	1.6	1.9	2	2.2	2.1

N = 26
Average standard deviation (root mean variance) 0.9768
Average standard error of means 0.19
C = construct
See Appendix 3 for full list of grid 1iii elements & constructs
Note: 1 = positive pole 5 = negative pole

Constructs	Components I	Components II
1. I did frequently/did not		+
2. communication important/not	+	
3. enjoyed/did not	+	
4. requires specialist knowledge/does not	+	-
5. involves patient/does not	+	
6. involves set procedures/does not		
7. risk of damaging patient/no risk	+	
8. simple/difficult		*
9. stressful/not		-
10. satisfying/not	+	
11. significant to recovery/not	+	
12. highly valued by me/not	+	
13. highly valued by trained staff/not	*	
14. trained staff did frequently/did not	+	

Contribution to variance of component I constructs = 84%
Constructs in order of contribution to variance
13,12,10,5,11,3,14,4,2,7,8,9,1,6

* denotes principal construct in component
+ denotes correlates positively with principal construct
- denotes correlates negatively with principal construct

Elements	Components	
	I	II
1. maintaining hygiene & comfort	*	
2. giving medication		
3. physical observations	+	
4. admissions		+
5. laying patient out		
6. non-nursing duties		
7. educating patients		*
8. technical procedures		+
9. administration		
10. maintaining safe environment	+	
11. listening to patients	+	+
12. reassuring and comforting patients	+	+

Elements in order of contribution to variance
1,11,12,10,7,3,8,6,4,2,5,9

* denotes principal element in component
+ denotes positive correlation with principal element

Table 7.4
Group C5, Nursing Activity Grid 1iv

	Elements															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
C1	2.0	4.1	1.8	3.9	3.8	2.1	4	4.0	3.2	3.8	4.6	3.9	3.6	3.9	3.9	3.8
C2	1.6	2.3	1.9	2.5	2.1	1.7	1.1	1.2	2.2	1.9	2.1	2.5	1.0	2.2	3.4	3.4
C3	3.9	1.9	3.8	1.3	1.6	3.8	2.4	2.4	2.6	1.6	1.2	2.5	3.2	2.6	3.8	4.2
C4	2.5	1.9	2.6	1.5	1.2	3.3	1.8	1.6	1.7	1.5	1.1	2.0	2.0	2.2	3.4	4.1
C5	3.5	2.7	2.8	3.1	3.3	1.9	2.1	2.8	2.5	3.5	2.1	2.3	2.2	3.4	2.9	3.1
C6	1.3	2.7	1.2	1.7	1.7	2.6	1.1	1.1	2.6	1.4	2	3.7	1.4	1.3	2.6	2.8
C7	1.3	3.2	1.3	2.9	2.8	2.7	1.9	1.8	1.8	1.6	2.8	2.5	1.8	1.5	3.0	3.0
C8	1.3	2.3	1	3.3	3.4	1.4	1.4	1.4	1.0	2.4	2.0	1	1.2	2.3	3.2	3.5
C9	4.7	4.5	4.6	4.5	4.6	3	3.2	4.1	1.1	4	4.1	4.6	3.5	4.4	4.4	4.5
C10	4	3.2	2.8	3.8	4	3.1	3.6	3.5	3.4	4.1	1.7	2.8	3.6	3.9	3.5	4
C11	1.6	3.3	2.3	3.6	3.7	2.1	2.1	1.8	1.4	2.2	2.5	2.1	1.5	2.3	3.4	3.6
C12	2.1	2.1	2.2	1.5	1.8	2.2	3.5	2.8	3.1	2.1	1.6	2.0	2.2	2.1	2.3	2.2
C13	2.7	3.6	2.2	3.9	4.1	2.2	2.5	3.4	3.1	3.4	3.5	2.7	2.7	4	3.4	3.7
C14	4.2	4.2	4.5	3.9	4.1	4.3	2.7	4.0	4.1	3.3	4.2	3.8	4.3	4.5	3.9	4.2
C15	3.2	2.2	3.9	1.9	1	3.4	3.5	3.4	3.9	2.7	2	3.4	3.7	3.1	2.5	2.5
C16	1.9	4.3	1.8	4.1	3.9	2.3	2.5	2.3	1.8	2.5	2.9	2.4	1.9	2.6	3.8	3.7

N = 41
Average standard deviation (root mean variance) 1.1405
Average standard error of means 0.18
C = Construct
See appendix 4 for full list of grid 1iv elements & constructs
Note: 1 = positive pole 5 = negative pole

Table 7.4

Constructs	Components I	Components II
1. standard activity/needs adapting		*
2. preventative/not	-	
3. important patient involved/not		-
4. important patient cooperates/not		
5. skilled activity/not		
6. important to do regularly/not		
7. routine/not	-	
8. needs teaching early/does not	-	
9. could affect own health/not likely	-	
10. done as part of multi disciplinary team/not		
11. well prepared/not	-	
12 enjoyable/not	+	
13. nervous about doing wrong/not	-	+
14. embarrassed/not		
15. influenced by time limitations/not	*	
16. carry out as taught/not	-	+

Contribution to variance of component I constructs = 75%
Constructs in order of contribution to variance
15,16,11,8,13,7,2,1,3,12,9,5,4,6,10,14

* denotes principal construct in component
+ denotes positive correlation with principal construct
- denotes negative correlation with principal construct
NB. constructs reflect anticipations/expectations

Elements	Components I	Components II
1. observations	+	+
2. learning about emotional condition	+	
3. accompanying on drug rounds	+	+
4. talking to patients	+	
5. listening to patients	+	
6. getting to know machinery & equipment		*
7. colostomy, catheter & bowel care	+	
8. pressure sore prevention	+	
9. lifting patients		
10. assisting with personal hygiene	+	
11. assisting with rehabilitation	+	
12. preparing patients for surgery	+	
13. wound care	+	+
14. keeping the patient comfortable	*	
15. talking to relatives	+	
16. listening to relatives	+	

Elements in order of contribution to variance
14,8,13,10,5,1,2,4,11,15,3,7,12,16,6,9

* denotes principal element in component
+ denotes positive correlation with principal element

Table 7.5
Group C6, Nursing Activity Grid 1v

	Elements												
	1	2	3	4	5	6	7	8	9	10	11	12	13
C1	2.8	2.1	2.5	2.2	2.4	2.9	4.3	3.5	1.5	1.9	2.7	2.8	3.5
C2	3.5	1.9	2.2	3.6	3.6	3.8	4.7	3.9	1.3	1.3	2.5	2.7	3.4
C3	2.9	1.7	2.1	3.8	3.8	4	4.7	3.7	1.2	1.3	2.2	2.7	3.1
C4	2.4	2.9	3	1.5	1.5	1.8	3.5	2.4	2.5	2.7	2.3	2.4	2.3
C5	2.5	1.2	1.5	4.2	4.1	4.1	4.4	3.5	1.1	1.2	1.9	1.7	2.3
C6	2.5	3.9	3.9	1.2	1.3	1.4	4.4	4.4	4	3.6	4	4.5	2.8
C7	1.3	1.1	1.5	2.5	2.3	2.5	2.4	1.7	1.6	1.9	2.2	1.9	2.5
C8	3.9	2.4	2.8	4.5	4.3	4.6	4.9	4	1.8	1.9	2.9	3.0	3.9
C9	2.4	2.3	2.3	1.4	1.4	1.6	3.7	2.3	1.9	1.5	2.2	2.1	2.4
C10	1.1	1.1	1.8	1.4	1.4	1.4	3.1	3.7	2.1	1.8	3.4	4.1	1.7
C11	1.9	2.6	2.4	1	1	1.1	4.1	2.5	3.3	2.8	2.7	2.2	1.6
C12	4.2	1.8	1.7	4.1	4.4	4.4	4.6	3.7	2.7	2	1.6	1.6	2.3
C13	2.6	1.9	1.7	2.5	2.5	2.7	4.4	4.3	1.6	1.7	1.8	1.4	2.5
C14	2.7	1.7	1.8	1.8	1.8	1.8	3.4	2.1	1.7	1.7	2.2	2.4	2.4
C15	3.3	3.6	3.6	2.6	2.5	2.6	2.7	2.9	3.9	3.7	3.1	3.0	3.4

N = 39
Average standard deviation (root mean variance) 1.0444
Average standard error of means 0.17
C = construct
See Appendix 5 for full list of grid 1v elements & constructs
Note: 1 = positive pole 5 = negative pole

Constructs	Components I	Components II
1. Important aid to recovery/not	+	
2. requires specialized skills/does not	+	
3. utilizes taught skills/does not	*	
4. requires initiative/does not		+
5. done in a specific way/not	+	-
6. requires empathy/does not		*
7. needs doing frequently/does not	+	
8. textbook learning important/not	+	
9. learning by experience important/not		+
10. requires patient contact/does not		+
11. communication skills essential/not		+
12. well documented/not	+	-
13. trained staff do frequently/do not	+	
14. I will enjoy/will not		
15. influenced by time limitations/not	-	

Contribution to variance of component I constructs = 72%
Constructs in order of contribution to variance
3,8,2,5,15,1,12,13,6,14,9,4,11,7,10

* denotes principal construct in component
+ denotes positive correlation with principal construct
- denotes negative correlation with principal construct
NB. Constructs reflect anticipations/expectations

Elements	Components I	Components II
1. assisting with personal hygiene	+	
2. carrying out observations		+
3. assisting on drug rounds		+
4. helping patients with worries	+	
5. reassuring patients	+	
6. listening to patients and relatives	*	
7. domestic activities	+	
8. observing qualified staff		
9. aseptic procedures		+
10. elementary technical care		*
11. working with care plans		+
12. hand-over reports		
13. admissions	+	

Elements in order of contribution to variance
6,5,4,10,3,2,9,11,1,12,7,13,8

* denotes principal element in component
+ denotes positive correlation with principal element

7.1.1 Selection of elements and constructs

This section addresses the first research question which was, which nursing activity elements and related constructs were generated by the groups and how did they differ in this respect?

Elements

The process of element elicitation was described in chapter 6. The elements were all nursing activities which the students had experienced, either personally or through observation of others, during their first eight months of training, or in the case of the comparison students expected to experience. All groups showed an awareness of the physical, technical and 'talking' aspects of nursing activity, although the 'umbrella' labels used to depict these were not always the same. 'Maintaining personal hygiene and comfort' featured in the grids of all three groups with experience, but although the ideas were present in the grids of the comparison groups the labelling was different. Common labelling of activities could be the result of shared nursing experience which the comparison groups do not yet have.

It is very likely that the longer a nurse is in training, the greater is the use of 'short hand' labels to depict a range of nursing activities. For example 'non nursing

duties'/'fetching and carrying' is referred to by all three groups with experience, but not by the comparison groups, one of which refers to 'domestic activities' and the other to no comparable activity. 'Non nursing duty' implies a judgement that we (nurses) should not be doing this, whereas 'domestic activities' is somewhat less value laden.

The nature of the comparison groups' wording of some nursing activities, when compared with that of the experienced groups, depicts an element of reserve in terms of their personal centrality to the activity and also highlights anticipations relating to their 'novice' role. For example, unlike the experienced groups they use the term 'assisting/accompanying on drug rounds', rather than 'giving medication'. They also refer, for example, to 'getting to know' machinery and equipment, and 'elementary technical care', rather than to 'carrying out technical procedures'. However, in spite of these relatively minor differences, the nursing activities experienced or anticipated were broadly the same for all groups. This is not surprising, as those who have entered a training programme are not likely to have done so without considering first what they are likely to be doing as nurses, and those students with eight months experience have all worked in the same clinical environment. The activities referred to are all very general and do not reflect specialized experience which may be gained in some settings and not others.

Constructs

For all groups a range of constructs was elicited relating to the nursing activity elements. There were areas of overlap between all of the groups in terms of the construct dimensions used to discriminate amongst the elements, but this was particularly notable for the three groups with experience. All groups included constructs to do with preparation for the nursing activities, and whether they were enjoyable. The three experienced groups also introduced, in explicit terms, the notion of activities being valued by themselves and the trained staff, and also the relative simplicity and stressfulness of the various activities.

The constructs generated by the comparison group reflected a greater preoccupation with school based and formal learning than those of the experienced groups. They included, for example, 'needs teaching early', 'will be able to carry out as taught', 'textbook learning important'. In contrast to this the constructs generated by the experienced groups clearly reflected central aspects of their experience such as, 'this activity was highly valued by me', 'I did frequently', 'self motivated'.

Constructs for each group grid are listed in Tables 7.1 to 7.5.

7.1.2 GAB analysis of construct/element relationships

The second and third research questions, relating to the similarities and differences between the groups, can be further explored in relation to GAB analysis of the average group grids. Question two asked which constructs contributed most to the overall variance within the grids, and what proportion of this variance was accounted for by component I

Contribution to variance of constructs

The order in which constructs contributed to variance demonstrated the importance/centrality of constructs to do with: how simple an activity was, for group O2 and group N3, how highly valued it was by the trained staff, for group N4, whether it was influenced by time limitations for group C5, and whether it utilized taught skills, group C6.

The central construct for each group, together with those constructs which related significantly to this, constituted component I.

Table 7.6

Grid 1, contribution to variance of component I constructs

GROUP	*CVCI*
O2	53%
N3	51%
N4	84%
C5	75%
C6	72%

Examination of the contribution to variance of component I (CVCI) scores indicated that the mean score for the groups with experience was lower than for the comparison groups - 62.6% compared with 73.5% - however, there is no apparent relationship between the contribution to variance of component one scores and the curriculum studied. These scores lend limited support to the notion that experience is likely to increase a student's ability to use a range of constructs in a flexible way to discriminate amongst elements. However, it must be noted that group N4 had a higher CVCI score (84%) than either comparison group (C5,75%, C6,72%).

construct/element relationships

The third research question related to issues of feeling prepared and evaluating nursing activities.

Groups O2, N3 and N4, reported that simple activities were those they felt well prepared to engage in, they did frequently, and were not stressed by. Maintaining hygiene

and comfort, physical observations, and non nursing duties were construed as simple by these groups. Group O2 students found psychological care difficult and did not consider themselves well prepared to provide this. The two new curriculum groups did not use the generic term 'psychological care', but broke it down into 'talking to patients' and 'helping patients cope with stress' (O3), and 'listening to patients' and 'reassuring and comforting patients' (O4). This could indicate that they had greater knowledge of specific activities implied by psychological care, which would not be unreasonable to assume in view of the increased emphasis on this in their training programme. Unlike group O2, groups N3 and N4 did not rate these 'psychological activities' as particularly difficult, with the exception of 'helping patients cope with stress' which received a rating of 3 on the simple/difficult continuum.

In relation to enjoyment, all three groups with experience rated 'psychological' activities as enjoyable (if ratings below 3 are taken to depict enjoyment), however, the two new curriculum groups showed greater enjoyment of these activities. Enjoyment and simplicity did not come within the same component for any of these groups, denoting that they were not significantly correlated.

Group O2, reported finding psychological care more stressful than the two new curriculum groups. It is

likely that the increased emphasis on psychological care in the new curriculum programme increased group O3 and O4 students' knowledge and skills, thereby reducing performance related anxiety. All three groups reported valuing 'psychological' care.

Both comparison groups rated elements in terms of anticipated enjoyment, but only group C5 rated elements in relation to how well prepared they anticipated being. This group demonstrated an inverse relationship between being well prepared and enjoyment. Group C5 anticipated enjoying all activities except colostomy and bowel care, and lifting patients, anticipating the greatest enjoyment in relation to talking and listening to patients, and rehabilitation. Group C6 anticipated enjoying all except domestic activities, but rated 'psychological' activities as more enjoyable than helping patients maintain hygiene.

Summary

Nursing activity grids 1i - 1v demonstrated that all groups enjoyed/anticipated enjoying, those nursing activities with a primary emphasis on interpersonal communication, and the three groups with experience reported valuing these activities highly. However, the two new curriculum groups rated the value of these activities more highly than the old curriculum group, and they also reported less stress in relation to carrying out psychologically related activities than the old

curriculum group. They also reported finding them simpler to do than group O2. These differences could be accounted for by the increased emphasis in the new curriculum on psychological and interpersonal aspects of care. However, whether they still exist at the end of three years of training will be revealed following analysis of grid 1B.

7.2 Analysis of Nursing Activity Grid 1B

Nursing Activity Grid 1B was completed by five groups of student nurses. Two old curriculum groups (O1 and O2), and two new curriculum groups (N3 and N4), completed grid 1Bi at the end of their three years of student nurse training. One comparison group (C7), completed grid 1Bii during their first week in the college of nursing.

Grids 1Bi and 1Bii were identical except that the latter reflected anticipations rather than actual experience, and there was a slightly different wording for construct 6, which for the experienced groups referred to being 'well qualified', and for the comparison group being 'well prepared'. It was expected that students in the experienced groups, who were on the verge of qualifying as Registered Nurses, could report on how qualified they felt to engage in a range of nursing activities, whereas the new students would think in terms of how well their training experience was likely to prepare them to engage in various nursing activities.

The elements and constructs contained within Grid 1B were selected by the researcher from those generated for Grids 1i to 1v, and allowed for comparison between the groups of the main themes identified in relation to Grid 1. The full list of Grid 1Bi and 1Bii elements and constructs can be found in Appendices 6 and 7. They also appear in abbreviated form beneath Tables 7.7 to 7.11.

Nursing Activity Grid 1B was analysed in relation to the following broad questions of interest:

1. What was the overall correlation between the average grids produced by each group, and in what particular ways did the grids differ? In view of the shared nursing practice experience it was expected that the overall correlation between the groups with experience would be higher than that between the non experienced and experienced groups. However, there were no clear expectations in terms of specific construct differences.

2. Which constructs contributed most to the overall variance within the grids? What proportion of the overall variance was accounted for by component I constructs? Were there similarities and differences between the groups in respect of these? How do these findings relate to those identified after eight months of training?

It was expected that component I constructs would contribute less to the grids' variance for the

experienced groups than for the inexperienced comparison group, and also that they would contribute less for each experienced group than they had after 8 months of training. This was based on the assumption that greater knowledge and experience would increase the number of meaningful constructs used to discriminate amongst nursing activity elements.

3. What does the GAB analysis tell us about the issues of feeling well prepared and evaluating nursing activities and were there notable differences between the groups? On the basis of the new curriculum content with its increased psychosocial emphasis, it was expected that the new curriculum students would feel better prepared to engage in 'social and psychological' aspects of care than the old curriculum students, value and enjoy these more highly, and feel less stressed in relation to them.

4. What does the HICLAS analysis tell us about the relationship between elements and constructs, and the hierarchical structure of these relationships? Were there similarities and differences between the groups in respect of these? Figures 7.1 to 7.5 provide a HICLAS profile, for each group, of construct element relationships.

Tables 7.7 to 7.11 below relate to the GAB analysis of the average Nursing Activity Grids 1 and 1B.

Table 7.7
Group O1, 'Nursing Activity' Grid 1Bi

	Elements										
	1	2	3	4	5	6	7	8	9	10	11
C1	1.9	1.5	3	2	3.4	1.7	1.7	2	1.9	2	3.1
C2	1.8	3.5	4.3	2.1	1.9	3	3.2	3.6	3.2	2.9	4.6
C3	1.6	1.8	1.7	1	1.8	1	1	1.2	1.2	1.3	2.3
C4	1.8	2.7	3.3	2.2	2.8	1.7	2	1.9	2	2.3	2.8
C5	4.4	4.2	3.8	4.2	4.3	3.2	3.6	3.4	2.6	3.5	2.7
C6	1	1.7	2.4	1.2	1	2.4	2.5	2.5	2.7	2.4	3.4
C7	1.7	1.5	1.9	1.4	2.5	1.4	1.5	1.4	1.2	1.4	3.1
C8	2.7	1.4	1.6	2.5	2.7	2	1.8	2	2	2	1.9
C9	1.3	2.7	2.2	1.2	3.2	1.6	2	2.2	1.4	1.6	4.5
C10	1	3	2.2	1.2	2.2	1.2	1.2	1.5	1.2	1.2	4.5
C11	1.9	1.2	1.2	1.8	1.9	1.7	1.5	1.4	1.4	1.3	3.9
C12	1.7	1.5	2.4	1.6	2.1	1.6	1.7	1.9	1.6	1.7	2.7
C13	3.7	4.7	4.3	3.8	4.3	2.4	3	2.6	2.8	3.2	3.7
C14	2.7	2.2	3.2	3	2.2	3	2.7	3.1	3.1	2.7	3.4

N = 19
Average standard deviation (root mean variance) 0.942
Average standard error of means 0.22
C = construct
See Appendix 6 for full list of grid 1Bi elements & constructs
Note: 1 = positive pole 5 = negative pole

Constructs	Components I	Components II
1. enjoy/do not		*
2. mainly done by students/trained staff	+	
3. communication important/not	+	+
4. limited by time/not	+	+
5. stressful/not		
6. well qualified/not		
7. highly valued by me/not	+	+
8. highly valued by trained staff/not		
9. highly valued by patients/not	+	+
10. involves the patient/does not	*	
11. important for recovery/not	+	
12. self motivated/not	+	+
13. optional/not		
14. well documented/not		

Contribution to variance of component I constructs = 70%
Constructs in order of contribution to variance
10,7,12,9,3,4,2,1,11,6,13,5,14,8

* denotes principal construct in component
+ denotes positive correlation with principal construct

Elements	Components	
	I	II
1. maintaining hygiene & comfort	+	+
2. specialized & technical procedures	+	+
3. giving medication	+	
4. admitting & orientating new patients	+	+
5. physical observations		*
6. learning about emotional condition	+	
7. teaching self care	+	
8. health promotion	+	
9. psychological care	+	
10. rehabilitation	*	
11. administration		

Elements in order of contribution to variance
10,7,8,6,4,9,3,1,2,5,11

* denotes principal element in component
+ denotes positive correlation with principal element

Table 7.8
Group O2, 'Nursing Activity' Grid 1Bi

	Elements										
	1	2	3	4	5	6	7	8	9	10	11
C1	1.6	1.4	2.5	2.3	3	1.5	1.3	1.8	1.7	1.5	3.1
C2	2.1	3	4.4	2	1.8	2.9	2.8	3.2	3.1	2.6	4.5
C3	1.2	1.4	1.2	1	2.2	1	1	1	1.1	1.1	1.8
C4	2.1	3.4	4	2.7	3	1.8	2.2	2.2	2	2.4	3.2
C5	4.8	4.3	4.3	4.6	4.4	3.6	4.1	4.1	3	3.7	2.8
C6	1	1.4	1.4	1.1	1.1	1.9	1.8	1.9	2.1	1.8	2.9
C7	1.8	1.5	1.9	1.6	2.1	1.6	1.4	1.6	1.5	1.6	3
C8	2.2	1.7	1.7	2.8	2	1.9	1.7	2	1.7	2	2.1
C9	1.4	2.3	2	1.6	2.7	2.2	2.1	2.3	1.8	1.7	4.5
C10	1.4	2.8	2.1	1.1	2.6	1.3	1.1	1.2	1.3	1.1	4.3
C11	2	1.4	1.4	2.3	1.6	1.6	1.3	1.9	1.4	1.2	3.6
C12	1.7	2.3	2.6	2.3	2.5	1.9	1.9	1.8	1.8	1.8	2.9
C13	3.8	4.5	4.2	4.3	4.5	2.5	2.8	2.4	2.5	3.1	3.8
C14	2.3	1.2	2.7	2.1	1.8	3.1	2.9	3.2	2.9	2.1	3.5

N = 18
Average standard deviation (root mean variance) 0.9304
Average standard error of means 0.23
C = construct
See Appendix 6 for full list of grid 1Bi elements & constructs
Note: 1 = positive pole 5 = negative pole

Constructs	Components I	Components II
1. enjoy/do not	+	
2. mainly done by students/trained staff		
3. communication important/not	+	
4. limited by time/not		
5. stressful/not		-
6. well qualified/not		*
7. highly valued by me/not	*	
8. highly valued by trained staff/not		
9. highly valued by patients/not	+	+
10. involves the patient/does not	+	
11. important for recovery/not	+	
12. self motivated/not	+	
13. optional/not		
14. well documented/not		+

Contribution to variance of component I constructs = 62%
Constructs in order of contribution to variance
7,10,9,12,1,6,11,3,13,4,2,5,14,8

* denotes principal construct in component
+ denotes positive correlation with principal construct
- denotes negative correlation with principal construct

Elements	Components I	Components II
1. maintaining hygiene & comfort	+	
2. specialized & technical procedures	+	
3. giving medication	+	
4. admitting & orientating new patients	+	
5. physical observations	+	
6. learning about emotional condition	+	
7. teaching self care	+	
8. health promotion	+	
9. psychological care	+	
10. rehabilitation	*	
11. administration		*

Elements in order of contribution to variance
10,7,1,6,8,3,9,4,2,5,11

* denotes principal element in component
+ denotes positive correlation with principal element

Table 7.9
Group N3, Nursing Activity Grid 1Bi

	Elements										
	1	2	3	4	5	6	7	8	9	10	11
C1	2.1	1.5	2.5	2.2	3.6	1.8	1.5	1.7	1.7	1.6	2.9
C2	1.3	3.1	3.9	2.2	1.6	2.6	2.8	3.1	2.7	2.2	4.4
C3	1.5	1.9	1.7	1.1	2.3	1.2	1.1	1.2	1.2	1.4	2.4
C4	1.7	2.9	4.1	2.3	2.9	1.5	1.8	1.8	1.5	2.2	3.2
C5	3.8	3.7	3.5	4	4.2	3.1	3.6	3.8	2.7	3.3	2.9
C6	1.1	1.7	1.8	1.2	1.2	2	2	2.2	2.5	1.9	3.2
C7	1.9	2.1	2.3	1.7	2.7	1.5	1.6	1.7	1.4	1.4	3.1
C8	2.8	1.6	1.5	2.3	2.3	2.1	1.8	1.8	2.1	2.0	1.8
C9	1.3	2.6	2.3	1.4	3	1.8	1.8	2.1	1.5	1.6	4.1
C10	1.2	3	2.4	1.3	2.2	1.3	1.2	1.5	1.2	1.1	4
C11	1.6	1.5	1.4	2.1	2.2	1.4	1.5	1.8	1.3	1.2	3.5
C12	2.1	2.6	2.9	2.2	3	2	1.9	2.2	2.1	1.9	3.6
C13	3.2	4.1	4.3	3.8	4.2	2.6	2.7	2.4	2.6	3.1	3.8
C14	2.7	1.8	2.7	2.8	2	3.5	3.3	3.5	3.5	2.8	3.5

N = 35
Average standard deviation (root mean variance) 0.9899
Average standard error of means 0.17
C = construct
See Appendix 6 for full list of grid 1Bi elements & constructs
Note: 1 = positive pole 5 = negative pole

Constructs	Components I	Components II
1. enjoy/do not	+	
2. mainly done by students/trained staff		*
3. communication important/not	+	
4. limited by time/not	+	
5. stressful/not		
6. well qualified/not		+
7. highly valued by me/not	+	
8. highly valued by trained staff/not		-
9. highly valued by patients/not	+	+
10. involves the patient/does not	+	+
11. important for recovery/not		
12. self motivated/not	*	
13. optional/not	+	
14. well documented/not		

Contribution to variance of component I constructs = 73%
Constructs in order of contribution to variance
12,7,10,9,3,4,13,1,11,2,6,14,8,5

* denotes principal construct in component
+ denotes positive correlation with principal construct
- denotes negative correlation with principal construct

Elements	Components	
	I	II
1. maintaining hygiene & comfort	+	+
2. specialized & technical procedures	+	+
3. giving medication	+	
4. admitting & orientating new patients	+	+
5. physical observations		*
6. learning about emotional condition	+	
7. teaching self care	+	
8. health promotion	+	
9. psychological care	+	
10. rehabilitation	*	
11. administration		

Elements in order of contribution to variance
10,7,6,4,8,9,1,3,2,5,11

* denotes principal element in component
+ denotes positive correlation with principal element

Table 7.10
Group N4, 'Nursing Activity' grid 1Bi

	Elements										
	1	2	3	4	5	6	7	8	9	10	11
C1	2.1	1.4	2.9	2.1	3.2	1.3	1.2	1.1	1.3	1.3	3.5
C2	1.5	3	4.1	1.7	1.7	3	3	3.1	3	2.1	4.4
C3	1.5	1.7	1.6	1.1	2.1	1	1	1	1.1	1.2	1.8
C4	2.3	3.2	3.3	2.8	2.3	2	1.7	1.5	1.6	2	2.3
C5	4.4	3.5	3.4	3.4	4.4	3.2	3.4	3.3	3.1	3.9	2.6
C6	1	1.4	1.7	1.2	1	2	1.8	1.7	2.1	1.5	2.9
C7	1.9	1.6	1.6	1.7	2.1	1.1	1.2	1.3	1.3	1.1	3.1
C8	2.6	1.6	1.5	1.9	2.5	1.5	1.7	1.6	1.7	1.7	1.4
C9	1.1	2.1	1.8	1.3	3	1.7	1.6	1.9	1.5	1.7	4.3
C10	1.1	2.4	1.5	1.1	1.9	1.1	1	1.3	1	1.1	3.9
C11	1.3	1.1	1	1.3	1.5	1.1	1.2	1.5	1	1	2.6
C12	1.4	1.6	1.9	1.8	1.6	1.8	1.8	1.9	1.3	1.5	2.4
C13	4.4	4.8	4.9	4.1	4	3.1	3	2.6	3	3.1	3.9
C14	3.3	2.2	2.6	3	2	3.8	3.7	3.7	3.8	2.9	3.5

N = 10
Average standard deviation (root mean variance) 0.8204
Average standard error of means 0.27
C = construct
See Appendix 6 for full list of grid 1Bi elements & constructs
Note: 1 = positive pole 5 = negative pole

Constructs	Components I	Components II
1. enjoy/do not	+	
2. mainly done by students/trained staff		+
3. communication important/not	+	
4. limited by time/not		
5. stressful/not		-
6. well qualified/not		*
7. highly valued by me/not	+	
8. highly valued by trained staff/not		-
9. highly valued by patients/not	+	
10. involves the patient/does not	*	
11. important for recovery/not	+	
12. self motivated/not	+	+
13. optional/not		
14. well documented/not		

Contribution to variance of component I constructs = 57%
Constructs in order of contribution to variance
10,9,7,6,11,3,1,12,5,2,13,8,14,4

* denotes principal construct in component
+ denotes positive correlation with principal construct
- denotes negative correlation with principal construct

Elements	Components I	Components II
1. maintaining hygiene & comfort	+	
2. specialized & technical procedures	+	
3. giving medication	+	
4. admitting & orientating new patients	+	
5. physical observations	+	
6. learning about emotional condition	+	
7. teaching self care	+	
8. health promotion	+	
9. psychological care	+	
10. rehabilitation	*	
11. administration		*

Elements in order of contribution to variance
10,7,6,9,4,8,1,3,2,5,11

* denotes principal element in component
+ denotes positive correlation with principal element

Table 7.11
Group C7, Nursing Activity Grid 1Bii

	Elements										
	1	2	3	4	5	6	7	8	9	10	11
C1	2.1	1.5	1.8	2	1.8	1.4	2	2	2	1.7	3.7
C2	1.8	3.7	3.7	2.4	2.1	2.6	2.7	2.7	3.2	2.7	3.6
C3	1.3	1.7	2	1.1	1.8	1.2	1.2	1.2	1.2	1.1	3.2
C4	2.9	3.6	3.8	3.1	3.7	3	3.1	2.8	3	3.4	2.6
C5	3.9	3.4	3.5	4.2	4.2	3	3.3	3.8	2.9	2.8	2.7
C6	1.7	1.2	1.2	2.1	1.3	2.1	1.7	1.7	1.7	1.6	2.3
C7	1.9	1.5	2	2	1.7	1.5	1.7	1.9	1.5	1.4	3.4
C8	2	1.6	2	2.5	1.9	1.7	1.7	1.9	1.7	1.7	2.4
C9	1.1	1.8	1.8	1.5	2.6	1.7	1.8	2.3	1.6	1.6	4.5
C10	1.2	2.6	2.3	1.4	2.5	1.7	1.2	1.4	1.7	1.3	4
C11	1.2	1.1	1.1	2.7	1.9	1.5	1.2	1.5	1.3	1.5	4
C12	1.5	2.7	3.1	2	2.5	1.8	1.7	2	1.6	1.7	3.6
C13	4.6	4.7	4.5	4.1	4.4	3.3	3.7	3.8	3.3	3.5	4.1
C14	2.2	1.4	1.3	2.8	1.7	2.3	2.4	2.9	2.7	2.4	2.6

N = 24
Average standard deviation (root mean variance) 0.982
Average standard error of means 0.2
C = construct
See Appendix 7 for full list of grid 1Bii elements & constructs
Note: 1 = positive pole 5 = negative pole

Constructs	Components I	Components II
1. enjoy/do not	+	
2. mainly done by students/trained staff		
3. communication important/not	+	
4. limited by time/not		-
5. stressful/not		
6. My training will prepare me well/will not		*
7. highly valued by me/not	*	
8. highly valued by trained staff/not	+	
9. highly valued by patients/not	+	
10. involves the patient/does not	+	
11. important for recovery/not	+	+
12. self motivated/not	+	
13. optional/not		
14. well documented/not		+

Contribution to variance of component I constructs = 74%
Constructs in order of contribution to variance
7,3,1,11,9,10,12,6,8,4,14,2,13,5

* denotes principal construct in component
+ denotes positive correlation with principal construct
- denotes negative correlation with principal construct

NB: Constructs reflect anticipations and should therefore be prefixed by 'I anticipate', 'I expect', or 'likely to be'.

Elements	Components I	Components II
1. maintaining hygiene & comfort	+	
2. specialized & technical procedures	+	
3. giving medication	+	
4. admitting & orientating new patients	+	
5. physical observations	+	
6. learning about emotional condition	+	
7. teaching self care	*	
8. health promotion	+	
9. psychological care	+	
10. rehabilitation	+	*
11. administration		

Elements in order of contribution to variance
7,10,6,8,9,1,2,4,5,3,11
* denotes principal element in component
+ denotes positive correlation with principal element

7.2.1 Correlation between the average grids

This section addresses the first research question listed in 7.2 above which related to the correlation between average grids, and the particular ways in which the grids differed.

As for Grid 1, individually completed grids for each group were averaged and one representative grid produced for each group. The standard error of means for Grids 1Bi and 1Bii ranged from 0.17 to 0.27.

A correlation matrix for each of the average grids was then derived.

Table 7.12

Matrix of correlations between group grids 1B

	O2	N3	N4	C7
O1	.934	.938	.926	.816
O2		.94	.911	.867
N3			.92	.815
N4				.818

All significant at .001

The most notable feature of Table 7.12 was the high correlation between all of the group grids. The

correlations between the groups with experience were not higher when they had followed the same curriculum. In contrast to this the correlation between each experienced group and the comparison group was slightly lower than that between the experienced groups. The indications, therefore, are that experience, rather than curriculum studied, produced the difference in overall grid correlations. It is remarkable, however, how closely the new students' anticipations resembled the reported experiences of the experienced groups.

Differences between the groups

The two grids for the old curriculum groups and those for the two new curriculum groups were each averaged together to give three average grids - one old, one new, and one comparison. These were then compared in pairs, using Unrotated Principal Components Analysis, with the two groups as variables and the grid cells as cases. Because they were highly correlated most of the variance fell on Factor 1. Differences between the groups were shown on Factor 2, and those cells with factor scores greater than 2 or less than -2 were considered indicative of the cells in the grids which differed most between the groups.

Table 7.13 lists those grid cells which differed most between the groups. Tables 7.7 to 7.11 provide the average data for each group grid, allowing for the identification of the average construct rating in respect

of each nursing activity element. A list of constructs and elements is provided beneath each average grid.

Table 7.13

Differences Between Average Nursing Activity Grids 1B

old versus new	old versus comparison	new versus comparison
O higher than N	*O higher than C*	*N higher than C*
C2, E10	C1, E5*	C1, E5*
C5, E2	C14, E3*	C14, E3*
C5, E4		C14, E6
C11, E11		C14, E7
N higher than O	*C higher than O*	*C higher than N*
C14, E1	C3, E11	C4, E6+
C14, E6	C4, E6+	C4, E7
C14, E7	C4, E10+	C4, E9
C14, E8	C13, E8+	C4, E10+
C14, E9		C13, E8+
C14, E10		

O = old curriculum
N = new curriculum
C = comparison
* denotes both old and new rate higher than the comparison
+ denotes comparison rates higher than both old and new.

Constructs

1. enjoy/do not
2. mainly done by students/trained staff
3. communication important/not
4. limited by time/not
5. stressful/not
6. well qualified/not
7. highly valued by me/not
8. highly valued by trained staff/not
9. highly valued by patients/not
10. involves the patient/does not
11. important for recovery/not
12. self motivated/not
13. optional/not
14. well documented/not

Elements

1. maintaining hygiene & comfort
2. specialized & technical procedures
3. giving medication
4. admitting & orientating new patients
5. physical observations
6. learning about emotional condition
7. teaching self care
8. health promotion
9. psychological care
10. rehabilitation
11. administration

Old versus New

Table 7.13 demonstrates that the old curriculum students reported less rehabilitation being done by students than was reported by the new curriculum groups (C2,E10). It could be that the new curriculum students engaged in more rehabilitation activities than the old as a result of the greater emphasis on psychosocial aspects of care in their training programme.

A second difference between the groups was reflected in the old curriculum students report of being less stressed by specialized and technical procedures (C5,E2), and admissions (C5,E4), than the new curriculum students. It is possible that the increased emphasis on the psychosocial aspects of care left less time in the programme for adequately preparing students to cope with these more traditional aspects of the nursing role.

A third difference was that the old curriculum students considered administration less important for recovery

(C11,E11), than the new curriculum students. There is no very obvious reason for this difference but it could be hypothesized that alongside the increased emphasis on psychosocial aspects of care, a greater awareness developed of the organizational aspects of care and the importance of one in relation to the other.

This hypothesis gains some support in relation to those areas in which the new curriculum students gave a higher rating than the old. The new curriculum students rated the maintenance of hygiene and comfort and a wide range of psychosocial nursing activities, such as rehabilitation, health promotion and psychological care, as less well documented than did the old curriculum students (C14,E1,6,7,8,9,10). The inclusion of so many psychosocial nursing activities could reflect that the new curriculum students' increased knowledge of these areas made them more critical of their limited documentation relative to other more traditional activities.

Old and New versus Comparison

Table 7.13 shows that there were a number of ways in which the comparison group differed from both the old and the new curriculum students. Both new and old curriculum students reported enjoying physical observations less than the comparison group anticipated they would (C1,E5), and both also reported that giving medication was less

well documented than the comparison group anticipated it would be (C14,E3). In keeping with the new curriculum students' greater criticism of documentation, noted earlier, this group also reported that learning about a patient's emotional condition and teaching self care, were less well documented than was anticipated by the comparison students (C14,E6,E7).

In addition to the points above, Table 7.13 shows that both new and old curriculum students reported that learning about a patient's emotional condition and patient rehabilitation were more likely to be limited by time constraints than the comparison group anticipated (C4,E6,E10), and also health promotion was more likely to be optional than the comparison group imagined (C13,E8). In addition, the new curriculum students reported that teaching self care, and psychological care, were also more limited by time constraints than the comparison group imagined they would be (C4,E7,E9).

The comparison group showed a tendency for optimism in their anticipations whereas a more critical appraisal was demonstrated by the new and old curriculum groups. Aspects of this critical appraisal were shared by both new and old curriculum groups, but the new curriculum students were more inclusive, for example in relation to time limitations and inadequate documentation of 'psychosocial' nursing activities.

The differences between the average grids of the experienced groups and non experienced comparison group could be accounted for by the difference in nursing experience, but the differences between the new and old curriculum students is likely to have resulted from the increased emphasis on the psychosocial aspects of caring included in the new curriculum programme.

7.2.2 Contribution to variance of constructs

This section addresses the second research question listed in 7.2, relating to the contribution to variance of component I constructs, and similarities and differences between the groups.

As for Grid 1, each average Grid 1B was analysed with the aid of the GAB computer programme. The contribution to variance of component I (CVCI) constructs for each group, and constructs in order of contribution to variance, can be found in Tables 7.7 to 7.11. They are also listed below alongside those for grid 1 for comparison purposes.

Table 7.14

Grids 1 and 1B contribution to variance of component I constructs

GROUP	*GRID 1 CVCI*	*GRID 1B CVCI*
O1	-	70%
O2	53%	62%
N3	51%	73%
N4	84%	57%
C5	75%	-
C6	72%	-
C7	-	74%

NB: - indicates grid not completed

The contribution to variance of component I constructs for the groups with three years experience ranged from 57% to 73%, with that for the comparison group 74%. There was no obvious relationship between curriculum studied and CVCI scores, and only very little support for a relationship between experience and a lower CVCI score.

On comparing the CVCI scores of the experienced groups with those they had produced after 8 months of training, it is worth noting that for groups O2 and N3 the score had increased after three years of training, whereas for group N4, which had a particularly high score at 8 months (84%), this score had reduced to 57%.

The CVCI score for the comparison groups remained almost constant for both Grid 1 and 1B in spite of the differences in the content of the grids and that different new groups completed each grid. This suggests that experience does have some impact on discrimination

between nursing activities. It appears that in the early stages of training there is a tendency for discrimination to increase, but that over time, familiarity results in a degree of habituation and reduced discrimination. This pattern is not supported, however, by group N4. Since their CVCI score at 8 months was so high there was little scope for an increase. However, their three year score supports the notion of experience increasing discrimination when compared with no experience at all, unless the CVCI score merely represented a regression to the mean.

Constructs in order of contribution to variance

Although there was some difference between the groups in terms of the construct contributing most to the overall variance within the grids, the rank ordered list of constructs for each group demonstrated considerable similarity in terms of the first four constructs for each group. For all four groups with experience, constructs 10,7, and 9 featured within the first four in terms of their contribution to variance, and for groups O1, O2, and N3 construct 12 also appeared. These constructs related to how highly an activity was valued by the student, whether it involved the patient and was highly valued by the patient, and whether it was self motivated (C12). These dimensions of construing are therefore important discriminatory variables for the experienced groups. Tables 7.7 to 7.11 show that for each group, the

constructs contributing most to variance were positively correlated with each other.

In contrast to this, although construct 7 (highly valued by me) contributed most to variance for the comparison group, constructs relating to communication, enjoyment, and importance for a patient's recovery, featured next in order of contribution to variance. As with the experienced groups, these constructs were all positively correlated.

The notable similarity between the experienced groups, and difference between these and the comparison group, indicates that three years of common nursing experience has had a powerful influence in determining those constructs most used to discriminate amongst nursing activities.

The ways in which these constructs were used to discriminate amongst the elements is shown in Tables 7.7 to 7.11. All groups with experience reported administration and physical observations as the least highly valued activities. Administration was consistently rated over 3, and physical observations, between 2 and 3. The comparison group also reported not valuing administration but were not especially negative in their rating of physical observations. All groups reported valuing psychosocial activities highly.

7.2.3 Issues relating to feeling well prepared

The third research question related to issues to do with feeling well prepared to engage in the various nursing activities.

If ratings of 3 and over on the well prepared/qualified continuum are indicative of not feeling well prepared, then the comparison group optimistically anticipated they would be well prepared to engage in all nursing activities. Those for which they anticipated being least well prepared, as defined by a rating above 2, were admissions, learning about a patient's emotional condition, and administration.

Groups O2 and N4 reported being well qualified to engage in all of the nursing activities, but felt least well qualified in relation to administration and psychological care. Groups O1 and N3 reported not being well qualified for administration, and psychological care again featured as the next, least well prepared area of activity.

Administration and psychological care also featured as the two most stressful activities for all groups, with the comparison group including rehabilitation as an additional area of anticipated stress. Interestingly, the groups did not report 'learning about a patient's emotional condition' as stressful, thereby demonstrating discrimination between listening and observational

skills, and skills connected with more active 'psychological care'.

Tables 7.7 to 7.11 show there is no apparent relationship between enjoyment and feeling well prepared, for any of the groups, since these two constructs are consistently in different components. However, enjoyment is related to an activity being highly valued by themselves, and as indicated above, psychosocial activities are highly valued by all groups.

Summary

Analysis of 1B Grids has shown the similarity which existed between the new curriculum and the old curriculum groups after three years of nurse training. In spite of the increased emphasis in the new curriculum programme on psychosocial aspects of care, all groups, including the comparison group, valued this area of activity. Apart from administration, however, psychological care rated as the least well prepared area of activity, and also the most stressful.

Some differences emerged between the groups in respect of specific grid cell ratings. In particular, the new curriculum students were more critical of the limitations relating to documentation of psychosocial activities, and also reported more involvement in rehabilitation of patients. These students were, however, more likely to be

stressed by specialized and technical procedures than the old curriculum students.

The comparison students demonstrated considerable optimism about their future training and practical experience, anticipating, for example, fewer time constraints upon psychosocial activities, and better preparation for these, than either of the experienced groups reported.

7.2.4 HICLAS analysis of Grid 1B

HICLAS analysis of grid 1B provides a simplified profile of the construct/element relationships depicted in Tables 7.7 to 7.11. Those constructs/elements with exactly the same profile are put together within a common class and the HICLAS structure shows the inter-relationship of classes of constructs and elements (De Boeck, Rosenberg & Van Mechelen 1993). For example, if two constructs have the same profile, except that one applies to one additional element, then there is a hierarchical relationship between them. HICLAS depicts the hierarchical relationship of both constructs and elements.

In order to carry out the HICLAS analysis, cell ratings for each of the 1B Grids were converted into binary form. The rating scale allowed GAB to identify the correlations between the constructs and the elements. GAB does not,

however, focus on the overall rating levels in terms of whether a construct could be said to apply to an element or not. In converting to binary form, all ratings below three were given a 1, and taken as indicative of a construct applying to an element. Ratings of 3 and above were given a 0 and taken as indicative of a construct not applying to an element.

The HICLAS analysis was then used to produce a diagram of the hierarchical structure of elements and constructs. Figure 7.1 provides an example of this. Constructs are shown within the top half of the structure and elements within the bottom half. Where two or more constructs appear within the same box this means that they have the same profile in terms of the way in which they relate to the elements shown in the bottom half of the structure. Where two or more elements appear in the same box this means that they have the same profile in relation to the way in which constructs apply to them. For ease of reference construct classes in each table are numbered, and element classes are denoted alphabetically.

Figure 7.1

Group 01
Grid 1Bi, graphic representation of HICLAS structure.

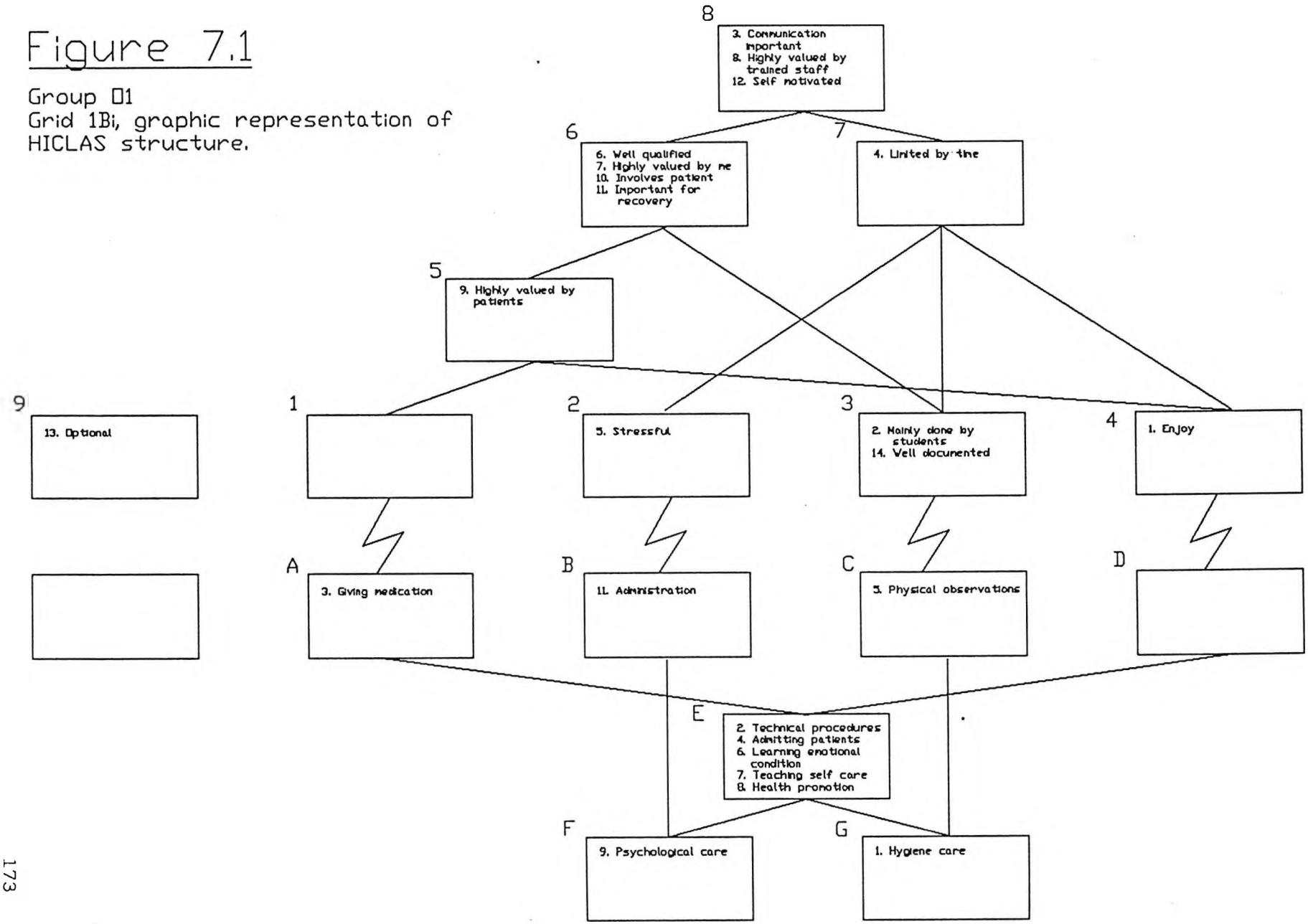


Figure 7.2

Group 02
Grid 1Bi, graphic representation of HICLAS structure

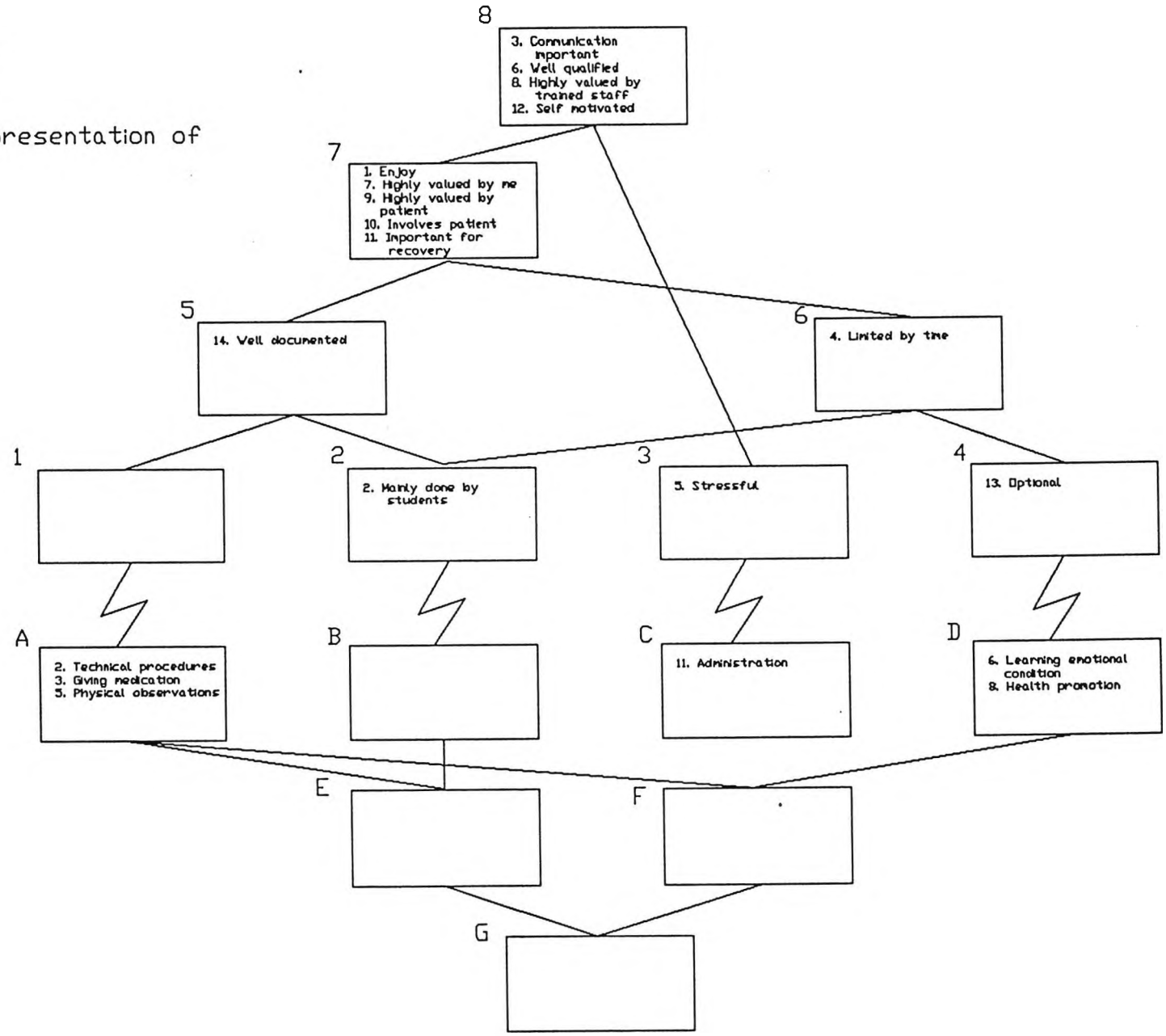


Figure 7.3

Group N3
Grid 1Bi, graphic representation of HICLAS structure.

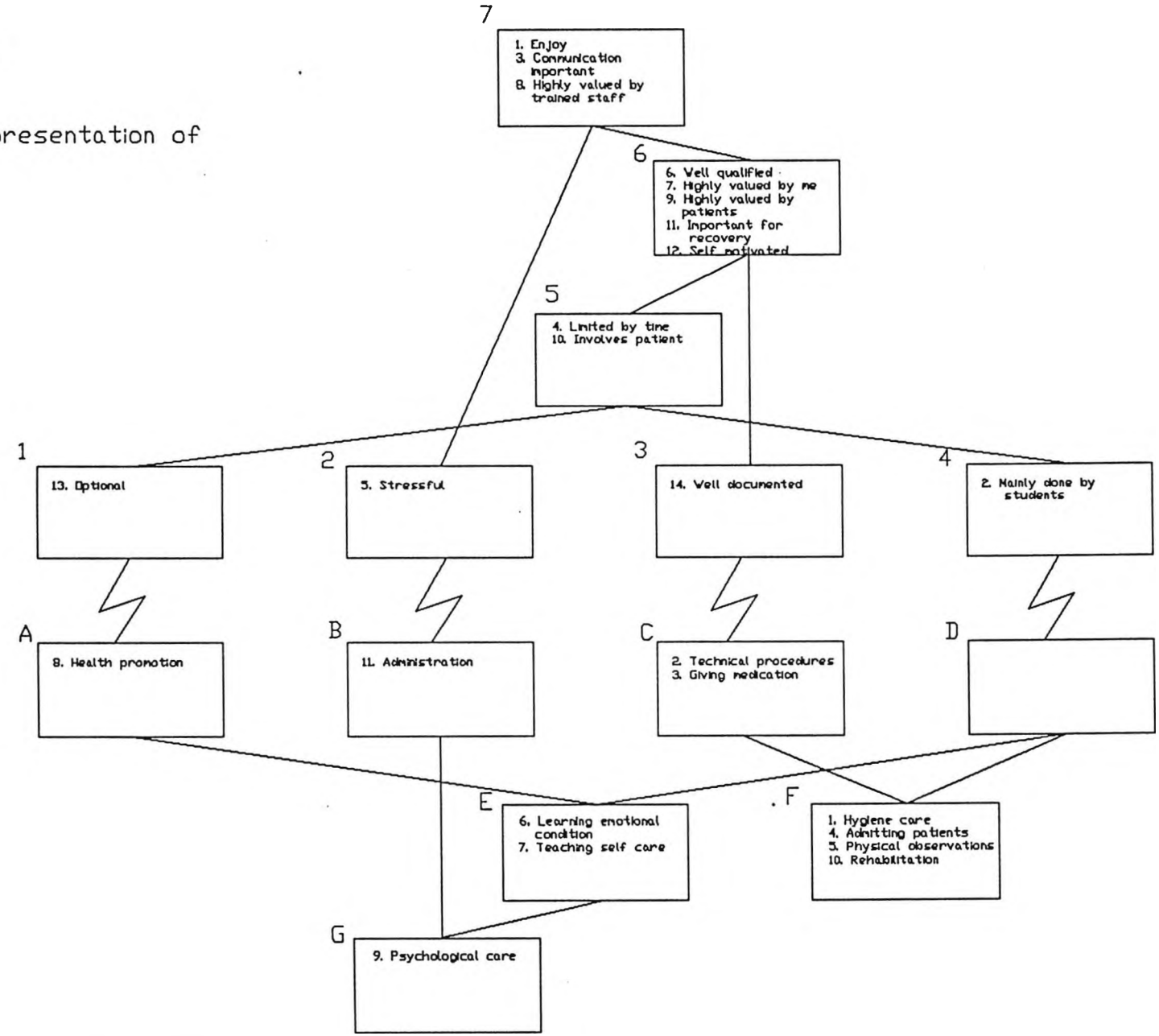


Figure 7.4

Group N4
Grid 1Bi, graphic representation of HICLAS structure.

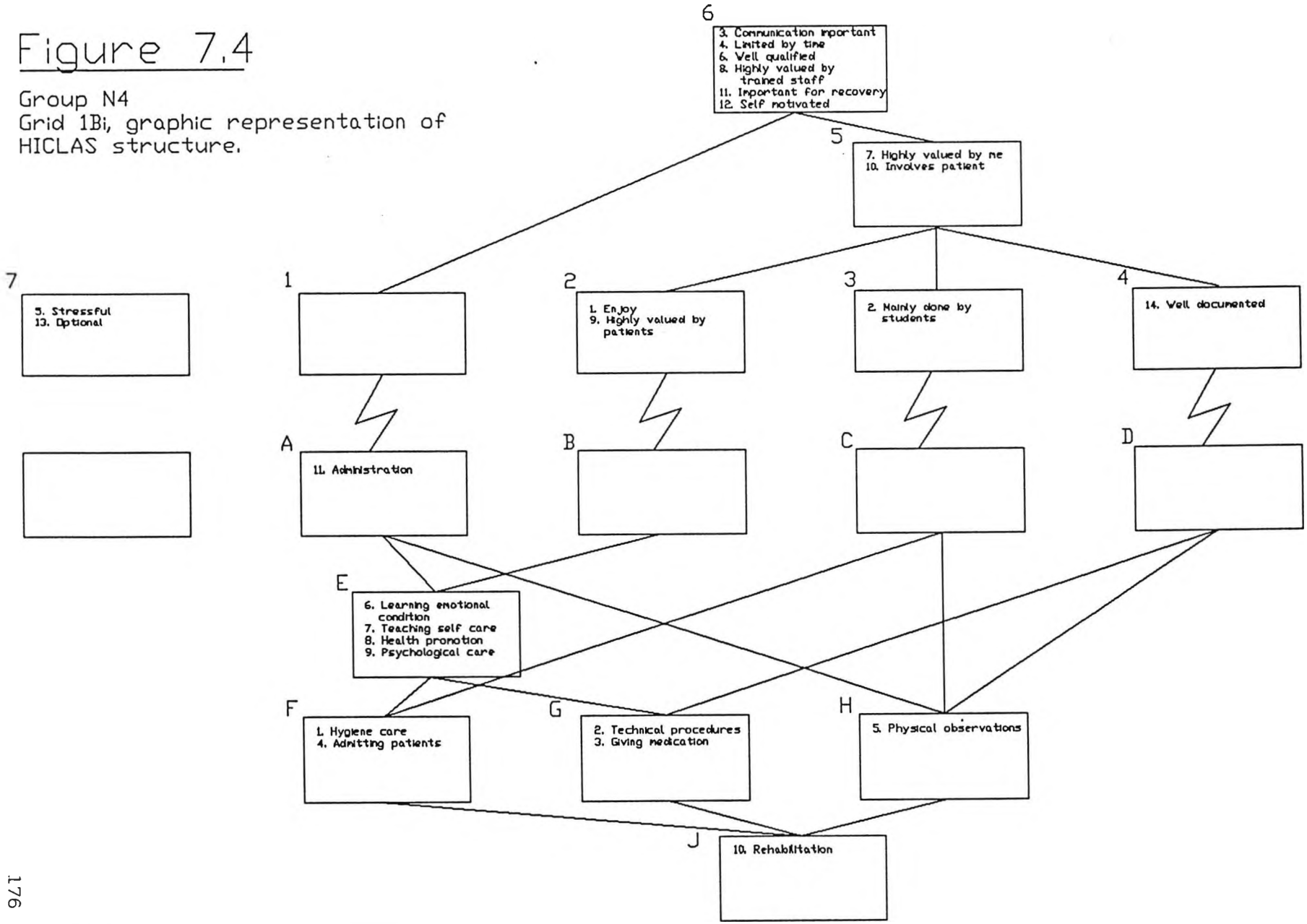
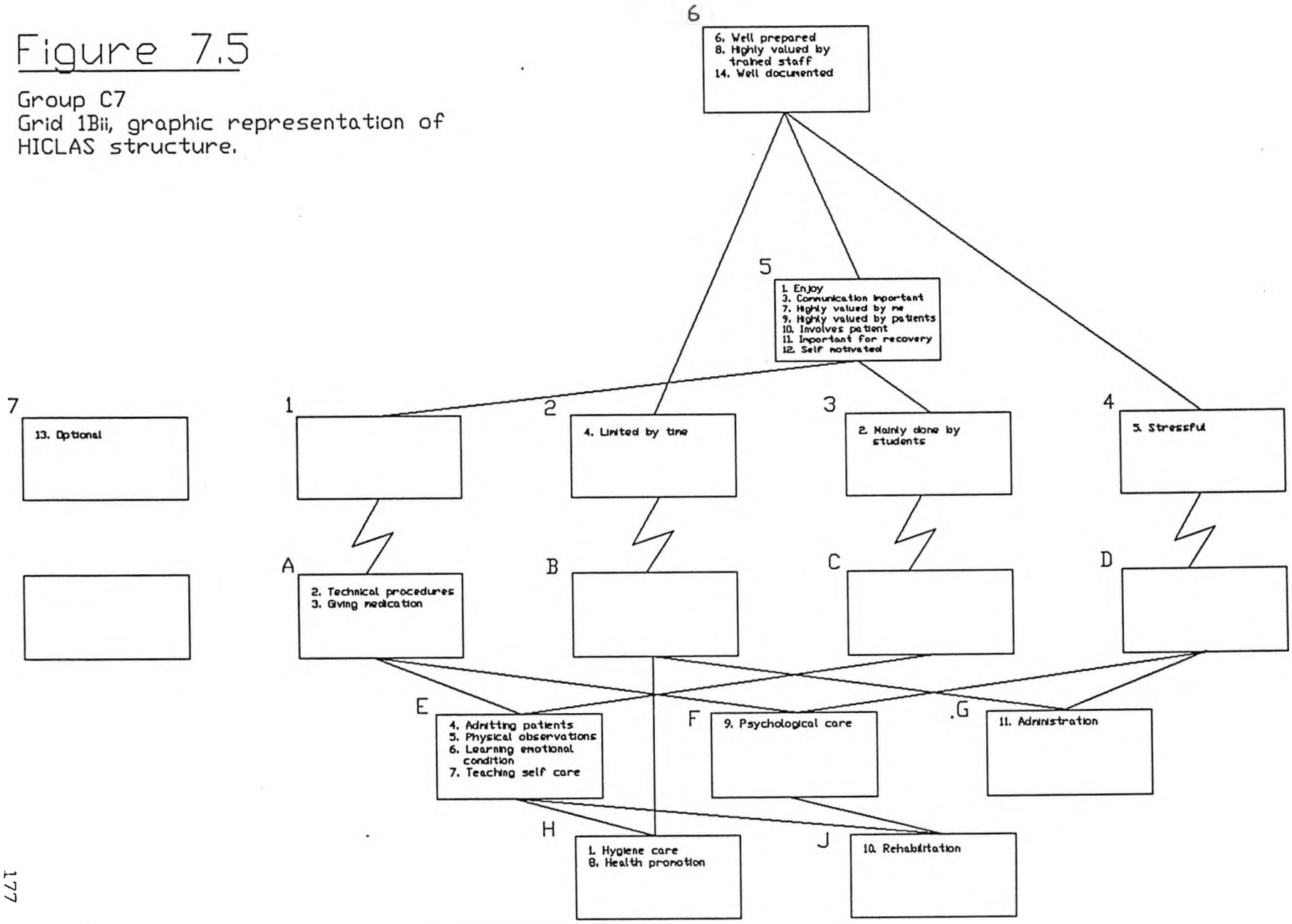


Figure 7.5

Group C7
Grid 1Bii, graphic representation of HICLAS structure.



Goodness of fit

HICLAS organizes the elements and constructs in terms of the 'best fit' rather than necessarily the exact fit. The level of fit can be influenced by the researcher, who may select the 'rank' of analysis. The 'rank' of analysis is reflected in the number of boxes across the centre of the structure. Rank 4 was selected for HICLAS analysis of Grid 1B. This is depicted by the four horizontal classes of elements and constructs in the centre of Figure 7.1. HICLAS gives the 'goodness of fit' of elements and constructs in terms of a percentage. The 'goodness of fit' within Figures 7.1 to 7.5 ranged from 94% to 99%. In real terms this meant that the number of discrepancies between the diagram and the actual data ranged from 1 to 7. The higher the rank of analysis, the more complicated the structure that is produced, and the better the fit to the data. Accuracy has to be balanced, however, against producing a structure that is easily interpretable.

Hierarchical structure

HICLAS organizes elements and constructs into a hierarchical structure. Those constructs near the centre of the structure tend to be more specifically focussed than those further out, which apply to a broader range of elements.

By tracing the pathway linkages between the classes it is possible to identify similarities and differences between the elements. By doing this for each group grid, between group comparisons can be made. Where disconnected classes appear to the left of the main structure, this indicates, in the case of elements, that none of the constructs apply to the elements in that class, and in the case of constructs, that the contents of the class apply to none of the elements.

Taking Figure 7.1 as an example, 'optional', in class 9, does not apply to any of the elements for group 01. Those constructs appearing in class 8 apply to all of the elements, and those in class 3 apply to 'physical observations' and 'maintaining personal hygiene and comfort'.

On the element side of the structure, 'administration' is not exactly like any other element in terms of its profile, and has fewer of the constructs applying to it than 'psychological care', or 'maintaining personal hygiene and comfort'. 'Psychological care' is like 'administration' in that it is 'stressful', but is like the 'maintenance of personal hygiene' in that it is 'enjoyable' and 'valued by the students', neither of which apply to administration.

Aims of HICLAS analysis

The main aim of the HICLAS analysis was to provide a clear profile, for each group, of construct element relationships. Of particular interest was the profile it produced in terms of prototypical nursing activities, and core constructs. Prototypical nursing activities were considered to be those to which all or the majority of the constructs applied. Core* constructs were considered to be those which had a broad focus and applied to all or the majority of the elements.

Using Figure 7.1 as an example, the construct 'stressful' (class 2) has a fairly narrow focus, applying only to 'administration' and 'psychological care'. In contrast, 'communication is important', 'highly valued by trained staff', and 'self motivated', apply to all of the nursing activities (class 8). In addition, those constructs in class 6, apply to all of the elements except for 'administration'. Therefore, if 'administration' was removed from the picture, those constructs in classes 6 and 8 would apply to all of the elements. These could then be described as the core, or defining attributes of all of the nursing activities.

On the element side of the structure, no nursing activity emerged in Figure 7.1 as a prototypical activity. That is

* 'Core' is not used in the Kellyian sense of 'core construct'.

to say, they emerged as a fairly complex set of activities, with no one activity having characteristics in common with all others. 'Psychological care' (class F), and 'maintaining personal hygiene and comfort' (class G), were the two most prototypical activities, however, each of these had distinct defining characteristics. 'Psychological care' was 'stressful', which 'maintaining personal hygiene' was not, and the latter was 'well documented' and 'mainly done by students', which 'psychological care' was not.

The exploration of elements and constructs in relation to defining characteristics of nursing and prototypical activities, has methodological interest relating to earlier discussions of cognitive complexity. GAB analysis of Grids 1 and 1B consistently identified a high contribution to variance of component I constructs (54% to 84%), which could be taken as reflecting a relatively simple construct system. However, the element relationships depicted in Figure 7.1 reflected a more complex structure.

A further area of interest, which like the above point had a methodological focus, related to whether comparable pictures of construing emerged following GAB and HICLAS analysis, in particular in relation to those constructs which applied to all, or nearly all, of the nursing activities. For example, Figure 7.1 depicted student nurses as well qualified to engage in psychological care,

yet GAB analysis identified this as one of the areas of care in which they felt least well qualified. It is, therefore, interesting to question whether apparent differences which emerged between the HICLAS and GAB results, reflected primarily a difference in measurement approaches, or whether they had theoretical interest in areas relevant to the study.

In the section below, the average nursing Activity grids for each group are explored in relation to 'core constructs' (not Kellyian), prototypical activities, and a comparison of differences emerging in relation to the GAB and HICLAS analyses.

Similarities and differences between the groups

Figures 7.1 to 7.5 provide diagrammatic representations of HICLAS analyses of Grid 1B for each group. Similarities and differences between the groups, relevant to those areas outlined above, are identified.

1. Core constructs

A number of core constructs, as defined by their application to all elements, emerged in the context of the HICLAS analysis. 'Highly valued by trained staff' was a defining attribute of the activities for all groups, with 'communication is an important part of this activity' being a defining characteristic of all

activities for the four groups with three years experience. When administration is removed from the structure, self motivation, feeling well qualified, and being valued highly by the students surface as core constructs for all groups. By contrast, constructs to do with the stressfulness of an activity and whether it is mainly done by students, feature in the centre of each structure, denoting they are used to differentiate nursing activities by all groups.

2. Prototypical activities

A fairly complex structure emerged for all groups in relation to elements. Only one group, N4, denoted an activity (rehabilitation), as having all of the attributes of the others.

For all groups the psychosocial activities such as psychological care, rehabilitation, and teaching self care, had features in common with each other, and also in common with the more traditional activities such as giving medication and carrying out technical procedures.

No notable differences which could be related to curriculum studied or length of experience emerged between the groups.

3. Comparing GAB and HICLAS analyses

A third point of interest identified above, related to whether comparable pictures of construing emerged following GAB and HICLAS analyses of Grid 1B data, and whether discrepancies could be accounted for solely in methodological terms.

The primary focus in respect of point 3, was on those constructs which applied to all, or the majority of the elements. Within this group of constructs 'well qualified' is of interest since it would appear that if administration is removed from the picture, the students felt well qualified, or in the case of the comparison students, anticipated being well prepared, to engage in all nursing activities. The GAB analysis, however, consistently depicted psychological care as the least well prepared area of nursing activity.

Since, however, the mean ratings for each group were always below three, psychological care was not reported to be an area of care for which the students were not well qualified, simply least well qualified. It is interesting to note that students only reported being poorly prepared/qualified in relation to administration. It is likely that the professional image of a nurse who has just reached the end of training, centres around constructs to do with caring, rather than administration,

and relies on feelings of competence in respect of those caring activities.

Interesting questions therefore arise relating to the self presentation of nurses within the context of acquiring and maintaining a professional image, and the impact of this self presentation on their recognition of personal learning needs. For example, does being 'least well qualified' in a particular area result in recognition of learning needs in that area? If the students still consider themselves 'well qualified' as depicted by a rating on the well qualified rather than the not well qualified side of the continuum, the experience of disjuncture (Jarvis 1992), may not be sufficiently great to stimulate learning.

7.3 Summary

In this chapter the results of Nursing Activity Grids I and IB have been presented. Grid I was analysed with the aid of the GAB computer programme, and grid IB used GAB and HICLAS analyses. In addition Unrotated Principal Components Analysis was used to compare the average Nursing Activity Grid IB for each student group.

In spite of the different curriculum programmes, and the indications after eight months of training of some differences between the groups in relation to

psychosocial activities, these differences were minimal after three years of training.

One positive feature of the results was the high value and enjoyment reported in relation to psychosocial areas of activity. However, in spite of this, students felt less well qualified in these areas of care than in the more conventional aspects of their role. One possible reason for this is that in spite of the new curriculum emphasizing the value of psychosocial activities, it was lacking in terms of teaching the students psychological care skills which could be realistically transferred to the clinical situation. This, coupled with the reported time limitations for psychological activities, is likely to have limited the opportunities for practice and associated skills development.

CHAPTER 8

Results: Patient Grids

8.1 Analysis of Patient Grid 2

Patient Grid 2 was completed by six groups of student nurses: Two old curriculum groups (groups O1 and O2), two new curriculum groups (groups N3 and N4), and two comparison groups (C8 and C9). The new and old curriculum student groups completed the grid in a study block after approximately two years of training. The comparison groups completed the grid during their first week in the college of nursing, before any formal training had commenced.

Each group completed exactly the same version of grid 2, which had 'patient types' as the elements, and constructs which related broadly to patient attributes, and various aspects of their care. Details of Grid 2 can be found in Tables 8.1 to 8.6 and also in Appendix 8. Chapter six describes the way in which Grid 2 was developed and administered.

Table 8.1
Group O1, 'Patient' Grid 2

	Elements											
	1	2	3	4	5	6	7	8	9	10	11	12
C1	3.9	2.6	3.9	3.4	2.2	2.9	1.5	1.9	1.9	4.3	1.8	4.9
C2	3.4	2.4	3.4	3.6	1.8	2.8	1.4	1.5	1.7	4	2	4.9
C3	3	2.3	2.4	3	1.9	2.8	1.5	1.8	1.7	3.3	2.3	4.8
C4	1.8	1.2	2.4	1.9	1.5	2	1.5	2.3	1.8	1.6	1.7	1.7
C5	1.1	1.3	2.4	1.5	1.3	1.7	1.5	2	1.4	1.3	1.5	1.2
C6	2.5	2.2	2.8	3.4	1.7	2.2	3	3.3	3.2	1.8	3.1	1.8
C7	1.6	2	1.8	2.3	3	2.7	3.2	2.4	1.9	1.5	1.8	2.6
C8	2.5	1.6	1.6	2.1	2.1	1.9	2.5	2.4	2	1.5	2	2.1
C9	1.8	1.6	2.8	2.4	2.1	2.7	2.6	2.7	2.3	1.6	2	2.1
C10	1.7	2	4.2	2.2	4.8	3.7	2.4	2.4	2.2	2.6	1.7	4.1
C11	1.8	2	3.8	2.4	2.8	2.8	2.4	2.3	2.2	2.5	1.6	2.9
C12	3.5	2.7	2.9	2.8	3	2.9	3.6	2.8	3.4	3.5	3	2
C13	2.6	1.6	2.2	2.5	1.9	1.9	2.6	2.3	2.1	1.9	2.1	1.9
C14	3	2.2	2.9	3.1	2.9	2.5	2.7	2.7	3.1	2.5	2.9	2.6
C15	2	1.8	1.9	2.1	2.1	2	2.4	1.9	1.9	2	1.9	1.9
C16	1.7	1	1.8	1.8	1.2	1.3	1.6	2.2	1.1	1	1.7	1
C17	3.5	1.4	1.4	3	2.2	1.5	2	2.3	2.3	1.4	2.3	2.1
C18	2.1	2.6	2.7	2.9	4.2	3.8	3.6	2.9	2.2	1.8	2	3.9
C19	4.2	2.2	2.2	3.3	2.7	2	2.3	2.6	2	2.9	2.5	2.8
C20	2.6	2.5	3.6	2.3	1.9	2.7	1.6	2.4	1.4	3.4	1.7	4.4
C21	1.4	1.3	1.3	1.4	1.4	1.2	1.6	1.3	1.2	1.4	1.2	1.2

N = 19
Average standard deviation (root mean variance) 0.927
Average standard error of means 0.22
C = construct
See Appendix 8 for full list of grid 2 elements & constructs
Note: 1 = positive pole 5 = negative pole

Table 8.1

Constructs	Components I	Components II
1. responsible for disorder/not	+	
2. avoidable/not	+	
3. preventable/not	+	
4. should take responsibility for health/should not		
5. should become involved in care/should not		
6. could make sensible decisions/could not		+
7. a lot can be done to help/can not		
8. nurses can do a lot/can not		+
9. could help self/could not		
10. stress part of cause/not		
11. suffering from stress/not		
12. I could be like this/could not	-	
13. I would enjoy nursing/would not		*
14. my perceptions shared/not		+
15. good person/bad person		+
16. should receive education/should not		
17. medical treatment important/not		+
18. likely to improve/not		
19. very ill/not		
20. behaviour contributed/did not	*	
21. deserves help/does not		

Contribution to variance of component I constructs = 29%
Constructs in order of contribution to variance
20,1,2,13,3,6,9,17,11,8,10,5,16,19,15,12,4,18,7,14,21

* denotes principal construct in component
+ denotes positive correlation with principal construct
- denotes negative correlation with principal construct

Elements	Components I	Components II
1. panic attacks	+	
2. heart attack	*	
3. pneumonia	+	
4. depression	+	
5. AIDS	+	+
6. lung cancer	+	
7. liver failure & alcoholism		*
8. overdose of sleeping pills		+
9. anorexia nervosa	+	+
10. asthma	+	
11. attempted suicide	+	+
12. multiple sclerosis	+	

Elements in order of contribution to variance
2,4,6,10,12,9,11,1,3,7,5,8

* denotes principal element in component
+ denotes positive correlation with principal element

Table 8.2
Group O2, 'Patient' Grid 2

	Elements											
	1	2	3	4	5	6	7	8	9	10	11	12
C1	3	2.7	3.9	3.4	2.4	2.9	1.5	2.2	2.4	4.5	1.8	4.9
C2	3.2	2.5	3.5	3.2	2	2.4	1.5	2	2.3	4.2	1.9	4.9
C3	2.6	2.3	2.6	3.2	1.8	2.5	1.7	1.6	1.9	3.6	1.7	4.8
C4	1.8	1.2	2.2	2.2	1.4	2	1.5	2.1	1.7	1.5	1.6	2.2
C5	1.1	1.3	2.2	1.6	1.3	2	1.4	2	1.4	1.4	1.6	1.5
C6	2.6	1.9	2.7	3.3	1.7	2.1	2.8	3.3	3.4	1.6	3.2	1.4
C7	1.7	2	2.4	2.5	3.4	3	3	2.4	2	1.9	2.4	2.9
C8	2.8	1.9	1.9	2.5	2.8	2.7	2.6	2.3	2.3	1.9	2.5	2.4
C9	1.5	1.7	3	2.7	2.7	2.7	2.4	2.8	2.2	2.4	2.2	2.7
C10	1.6	1.3	5.6	2	4.7	3.8	1.8	2.1	1.6	2.8	1.6	4.4
C11	1.7	1.6	3.5	2.1	2	1.9	1.8	2	1.6	2.8	1.9	2.4
C12	4.1	2.7	2.9	3	3.8	2.6	4.3	3	4	3.8	4	1.9
C13	3.4	1.7	1.9	3	2	1.9	2.6	2.6	2.6	1.8	2.7	1.9
C14	2.9	2.1	2.4	2.9	2.9	2.3	2.6	2.7	2.8	2.2	2.9	2.2
C15	2.2	2.2	2.2	2.2	2.3	2.1	2.3	2.2	2.3	2.1	2.1	2
C16	1.3	1	1.8	1.8	1.1	1.5	1.2	1.8	1.3	1.2	1.3	1.3
C17	3.9	1.4	1.3	2.9	1.9	1.9	2.1	2.4	2.2	1.6	2.4	1.9
C18	2.4	2.3	2.3	2.6	4.2	3.5	3.6	2.8	2.2	1.8	2.5	3.8
C19	3.9	2.4	2.4	3	1.8	1.8	1.9	2.5	2.1	2.3	2.2	2.7
C20	2.2	2.5	3.3	2.5	2.2	2.5	1.5	2.3	1.9	3.4	2	4.8
C21	2	1.5	1.5	1.7	1.4	1.4	1.5	1.6	1.4	1.4	1.4	1.2

N = 22
Average standard deviation (root mean variance) 0.931
Average standard error of means 0.2
C = construct
See Appendix 8 for full list of Grid 2 elements & constructs
Note: 1 = positive pole 5 = negative pole

Table 8.2

Constructs	Components I	Components II
1. responsible for disorder/not	+	
2. avoidable/not	+	
3. preventable/not	+	
4. should take responsibility for health/should not		
5. should become involved in care/should not		
6. could make sensible decisions/could not	-	+
7. a lot can be done to help/can not		
8. nurses can do a lot/can not		
9. could help self/could not		
10. stress part of cause/not	+	-
11. suffering from stress/not	+	
12. I could be like this/could not	-	
13. I would enjoy nursing/would not		*
14. my perceptions shared/not		+
15. good person/bad person	-	
16. should receive education/should not		
17. medical treatment important/not		+
18. likely to improve/not		
19. very ill/not		+
20. behaviour contributed/did not	*	
21. deserves help/does not		+

Contribution to variance of component I constructs = 51%
Constructs in order of contribution to variance
20,1,2,13,3,17,10,14,12,11,6,21,9,15,4,19,8,7,5,16,18

* denotes principal construct in component
+ denotes positive correlation with principal construct
- denotes negative correlation with principal construct

Elements	Components I	Components II
1. panic attacks	+	+
2. heart attack	+	
3. pneumonia		+
4. depression	+	+
5. AIDS		
6. lung cancer		
7. liver failure & alcoholism	+	
8. overdose of sleeping pills	+	
9. anorexia nervosa	*	
10. asthma		*
11. attempted suicide	+	
12. multiple sclerosis		+

Elements in order of contribution to variance
9,11,7,8,2,4,10,12,1,6,5,3

* denotes principal element in component
+ denotes positive correlation with principal element

Table 8.3
Group N3, 'Patient' Grid 2

	Elements											
	1	2	3	4	5	6	7	8	9	10	11	12
C1	3.4	2.7	4.2	3.3	2.5	2.6	1.6	1.5	2.2	4.4	2.2	4.9
C2	3.2	2.5	4.1	3.3	2	2.6	1.4	1.6	2.2	4	2.3	4.9
C3	2.3	2.4	3.2	3.1	2.2	2.7	1.5	2.1	2	3.2	2.3	4.8
C4	1.6	1.2	2.3	2	1.6	1.7	1.3	1.9	1.6	1.5	1.8	2.1
C5	1.1	1.2	2.3	1.6	1.4	1.7	1.4	1.9	1.3	1.4	1.7	1.4
C6	1.9	1.9	2.9	3	1.9	2.1	2.7	3.2	2.9	2	3.2	1.8
C7	1.6	1.8	2.2	2.2	3.6	3	2.9	2.4	2.1	1.5	2.1	2.9
C8	2.5	1.6	1.7	2.1	2.6	2.3	2.5	2.2	1.9	1.7	2.1	2
C9	1.7	1.7	3	2.5	2.9	2.8	2.4	2.8	2.2	1.9	2.3	2.5
C10	1.6	1.6	4.3	1.8	4.7	3.9	2.3	2	1.8	2.2	1.4	4.5
C11	1.9	1.8	4	1.9	2.7	2.5	2.1	2	1.8	2.3	1.5	2.6
C12	3.7	2.6	2.9	2.9	3.2	2.7	3.5	3.5	4.3	4	3.7	2.4
C13	3.2	1.8	2.1	3.4	2.2	2	2.3	2.5	2.4	1.8	2.3	1.9
C14	2.9	2	2.3	3.1	2.8	2.3	2.6	2.6	2.6	2.3	2.8	2.3
C15	2.1	2.1	2.1	2.1	2.4	2.2	2.4	2.2	2.3	2.1	2.2	2.1
C16	1.5	1.1	1.7	2	1.2	1.3	1.5	2	1.4	1.2	1.7	1.1
C17	3.7	1.2	1.3	3.1	1.6	1.4	1.6	2.3	2.5	1.4	2.7	1.9
C18	2.4	2.4	2.4	2.7	4.3	3.6	3.3	2.5	2.3	1.7	2.1	3.7
C19	4	2	2.1	3.2	1.7	1.9	2	2.7	2.2	2.6	2.5	2.3
C20	2.1	2.2	3.2	2.5	1.9	2.3	1.5	1.9	1.9	3	1.9	4.7
C21	1.7	1.3	1.5	1.7	1.5	1.5	1.6	1.5	1.4	1.4	1.5	1.3

N = 38
Average standard deviation (root mean variance) 0.9127
Average standard error of means 0.15
C = construct
See Appendix 8 for full list of grid 2 elements & constructs
Note: 1 = positive pole 5 = negative pole

Table 8.3

Constructs	Components I	Components II
1. responsible for disorder/not	+	
2. avoidable/not	+	
3. preventable/not	+	
4. should take responsibility for health/should not		
5. should become involved in care/should not		
6. could make sensible decisions/could not		
7. a lot can be done to help/can not		+
8. nurses can do a lot/can not		
9. could help self/could not		+
10. stress part of cause/not		*
11. suffering from stress/not		+
12. I could be like this/could not		
13. I would enjoy nursing/would not		
14. my perceptions shared/not		
15. good person/bad person	-	
16. should receive education/should not		
17. medical treatment important/not		
18. likely to improve/not		+
19. very ill/not		
20. behaviour contributed/did not	*	
21. deserves help/does not		

Contribution to variance of component I constructs = 29%
Constructs in order of contribution to variance
20,10,3,2,1,13,17,14,16,19,7,21,15,11,9,4,18,8,6,12,5

* denotes principal construct in component
+ denotes positive correlation with principal construct
- denotes negative correlation with principal construct

Elements	Components I	Components II
1. panic attacks	+	+
2. heart attack	+	
3. pneumonia		+
4. depression	+	
5. AIDS		+
6. lung cancer		*
7. liver failure & alcoholism	+	+
8. overdose of sleeping pills	+	
9. anorexia nervosa	*	
10. asthma	+	
11. attempted suicide	+	
12. multiple sclerosis		+

Elements in order of contribution to variance
9,2,11,10,6,4,12,8,7,1,5,3

* denotes principal element in component
+ denotes positive correlation with principal element

Table 8.4
Group N4, 'Patient' Grid 2

	Elements											
	1	2	3	4	5	6	7	8	9	10	11	12
C1	3.6	3.2	3.8	3.5	2.6	2.6	1.5	2.4	2.7	4.2	2.5	5
C2	3.8	2.9	3.3	3.6	2.3	2.6	1.6	2.6	2.9	4	2.5	5
C3	2.6	2.3	2.4	2.9	2.1	2.4	1.7	2.1	2.5	3.4	2.3	4.8
C4	1.9	1.5	2.5	2.2	1.8	1.9	1.6	2.3	1.9	1.8	1.9	2.3
C5	1.3	1.4	1.9	1.6	1.5	1.6	1.6	1.9	1.5	1.3	1.6	1.5
C6	2.1	1.9	2.6	3	1.8	2	2.4	2.7	3	1.7	2.5	1.8
C7	1.7	1.7	2.2	2.2	3.3	2.7	2.9	2	1.9	1.6	1.8	2.5
C8	2.5	1.5	1.7	2.2	2.3	2	2.3	1.8	1.9	1.6	1.8	2.1
C9	2	1.7	2.9	2.5	2.7	2.6	2.3	2.7	2.3	1.7	2.3	2.4
C10	1.7	2	4	2.1	4.4	3.3	2.2	2.1	1.7	2.3	1.7	4.2
C11	1.8	1.8	3.3	2	2.6	2.1	2.1	2	1.8	2.2	1.7	2.6
C12	3.6	2.7	2.8	2.7	3.3	3.1	3.4	3.1	3.5	3.8	3.5	2.4
C13	2.6	2.4	2.4	2.3	2.4	2.4	2.5	2.3	2.1	2.3	2.1	2.1
C14	2.7	2.1	2.2	2.9	2.9	2.4	2.8	2.8	2.7	2.1	2.8	2.3
C15	1.5	1.6	1.6	1.9	1.8	1.7	2.2	1.6	1.6	1.6	1.9	1.8
C16	1.3	1.1	1.5	1.5	1.3	1.2	1.2	1.7	1.3	1.1	1.5	1.1
C17	4.2	1.3	1.5	3.3	1.9	1.4	1.9	2.6	2.4	1.5	2.7	2.1
C18	2.2	2.1	2.3	2.5	3.8	3.3	3.2	2.3	2.3	1.5	1.9	3.7
C19	3.7	2.2	2.1	3.1	1.9	2.1	2.3	2.6	2.1	2.8	2.5	2.7
C20	2.7	2.6	2.9	2.4	2.2	2.5	1.4	2.2	1.7	3.2	2	4.7
C21	1.5	1.3	1.4	1.4	1.3	1.4	1.5	1.4	1.3	1.3	1.3	1.2

N = 35
Average standard deviation (root mean variance) 0.8817
Average standard error of means 0.15
C = construct
See Appendix 8 for full list of grid 2 elements & constructs
Note: 1 = positive pole 5 = negative pole

Table 8.4

Constructs	Components I	Components II
1. responsible for disorder/not	+	
2. avoidable/not	+	
3. preventable/not	+	
4. should take responsibility for health/should not		
5. should become involved in care/should not		
6. could make sensible decisions/could not		
7. a lot can be done to help/can not		+
8. nurses can do a lot/can not		
9. could help self/could not		
10. stress part of cause/not		*
11. suffering from stress/not		+
12. I could be like this/could not		
13. I would enjoy nursing/would not		
14. my perceptions shared/not	-	
15. good person/bad person		
16. should receive education/should not		
17. medical treatment important/not		
18. likely to improve/not		+
19. very ill/not		
20. behaviour contributed/did not	*	
21. deserves help/does not		

Contribution to variance of component I constructs = 33%
Constructs in order of contribution to variance
20,1,2,3,10,14,9,7,21,16,11,5,18,4,6,17,19,8,12,15,13

* denotes principal construct in component
+ denotes positive correlation with principal construct
- denotes negative correlation with principal construct

Elements	Components I	Components II
1. panic attacks	+	
2. heart attack	*	+
3. pneumonia	+	
4. depression	+	
5. AIDS		*
6. lung cancer	+	+
7. liver failure & alcoholism		+
8. overdose of sleeping pills	+	
9. anorexia nervosa	+	
10. asthma	+	
11. attempted suicide	+	
12. multiple sclerosis	+	+

Elements in order of contribution to variance
2,9,4,10,11,8,6,1,12,3,5,7

* denotes principal element in component
+ denotes positive correlation with principal element

Table 8.5
Group C8, 'Patient' Grid 2

	Elements											
	1	2	3	4	5	6	7	8	9	10	11	12
C1	3.2	2.7	3.3	3.1	2.4	2.6	1.3	2.1	1.8	4.4	1.8	4.6
C2	3.1	2.2	2.6	2.9	1.9	2.3	1.2	1.8	1.7	4.1	1.6	4.6
C3	2.2	2.3	1.6	2.3	1.9	2.2	1.3	1.6	1.5	3.4	1.7	4.5
C4	2.1	1.4	2.2	2.3	1.7	1.8	1.6	2.5	1.9	2.1	2.3	2.1
C5	1.9	1.4	2.2	2.1	1.7	1.9	1.7	2.5	1.9	1.8	1.8	1.6
C6	2	2.2	3.4	3.5	2.3	2.3	2.8	3.4	3	2.1	3.3	1.9
C7	1.9	2.1	2.4	2.3	4	2.9	2.6	2.4	2	2	1.9	3
C8	3	1.9	1.9	2.5	2.9	2.1	2.4	2.2	2.1	2.2	2.1	2.6
C9	1.7	1.8	3	2.4	3	2.6	1.8	2.6	2.1	2.1	2.1	2.9
C10	1.6	1.8	4.3	2	4.7	3.7	2.4	2.4	2	2.8	1.8	4.3
C11	1.7	1.9	4.2	2.1	3.5	3.2	2.4	2.3	2.1	3	1.8	3.4
C12	3.3	3.2	3	2.8	3.5	3.1	3.8	3.1	3.5	4.2	3.4	2.3
C13	2.7	2.1	2.1	2.5	2.6	2.3	2.9	2	1.9	1.9	1.9	1.9
C14	2.7	1.9	2.3	2.7	2.7	2.3	2.7	2.7	2.7	2.1	2.6	2.2
C15	1.8	1.8	1.8	2.2	2.3	1.9	2.5	1.8	1.9	1.8	2.1	1.7
C16	1.4	1.2	1.8	2	1.4	1.5	1.6	2.1	1.3	1.3	1.7	1.2
C17	3.4	1.4	1.8	3	2	1.6	2.1	2.3	2.2	1.4	2.1	1.9
C18	2.4	2.2	2.4	2.3	4.4	3.3	3	2.4	2.2	2.1	2	4.1
C19	4	2	2.1	3.2	2.2	1.9	2.1	2.4	2.1	2.4	2.4	2.1
C20	2.5	2.1	2.5	2.1	2.1	2.2	1.4	2.3	1.5	3.1	1.7	4.6
C21	1.9	1.6	1.8	1.7	1.5	1.6	1.9	1.8	1.5	1.6	1.4	1.5

N = 44
Average standard deviation (root mean variance) 1.051723
Average standard error of means 0.16
C = construct
See Appendix 8 for full list of grid 2 elements & constructs
Note: 1 = positive pole 5 = negative pole

Table 8.5

Constructs	Components I	Components II
1. responsible for disorder/not	+	
2. avoidable/not	+	
3. preventable/not	+	
4. should take responsibility for health/should not		
5. should become involved in care/should not		
6. could make sensible decisions/could not		
7. a lot can be done to help/can not		+
8. nurses can do a lot/can not		
9. could help self/could not		+
10. stress part of cause/not		*
11. suffering from stress/not		+
12. I could be like this/could not		
13. I would enjoy nursing/would not		
14. my perceptions shared/not		
15. good person/bad person	-	
16. should receive education/should not		
17. medical treatment important/not		
18. likely to improve/not		+
19. very ill/not		
20. behaviour contributed/did not	*	
21. deserves help/does not		

Contribution to variance of component I constructs = 30%
Constructs in order of contribution to variance
20,3,1,2,10,18,14,9,6,11,7,17,16,5,19,15,13,4,8,21,12

* denotes principal construct in component
+ denotes positive correlation with principal construct
- denotes negative correlation with principal construct

Elements	Components I	Components II
1. panic attacks		
2. heart attack	+	+
3. pneumonia		+
4. depression	+	
5. AIDS		+
6. lung cancer		*
7. liver failure & alcoholism	+	+
8. overdose of sleeping pills	+	
9. anorexia nervosa	*	
10. asthma		+
11. attempted suicide	+	
12. multiple sclerosis		+

Elements in order of contribution to variance
9,11,6,8,2,7,5,10,3,12,4,1

* denotes principal element in component
+ denotes positive correlation with principal element

Table 8.6
Group C9 'Patient' Grid 2

	Elements											
	1	2	3	4	5	6	7	8	9	10	11	12
C1	3.4	3.2	4.0	3.2	2.7	2.4	1.9	2.2	2.3	4.2	2.2	4.7
C2	3	2.9	3.3	2.9	2.3	2.1	1.5	2.2	2.2	4	2.1	4.6
C3	2.3	2.6	2.4	2.9	2.2	2.3	1.7	2.1	1.9	3.3	1.8	4.6
C4	1.8	1.5	2.1	1.9	1.8	1.8	1.4	1.8	1.6	1.4	1.5	2
C5	1.3	1.5	2.1	1.8	1.6	1.6	1.4	1.8	1.3	1.3	1.5	1.5
C6	2.3	2.2	3.2	3.2	2.1	2.1	2.8	3.5	2.9	1.9	3.4	2
C7	1.9	2.2	2.3	2.2	3.4	2.6	2.2	2.1	1.7	1.8	1.7	3
C8	2.8	2.1	1.8	2.6	2.5	2.1	2.1	2.2	1.9	1.9	1.9	2.5
C9	1.9	2	3	2.2	3	2.6	1.9	2.4	1.8	2.1	2	3.2
C10	1.8	1.9	4.1	1.9	4.7	3.4	1.9	2.4	1.7	2.7	1.5	4.1
C11	1.9	2.1	3.9	1.7	2.8	2.8	2	2.3	1.8	2.8	1.6	2.9
C12	3.6	3.2	3.1	3.1	3.6	3.5	4	3.6	3.8	4.1	3.9	2.7
C13	2.6	2.1	2.2	2.7	2	1.9	2	2.2	1.8	1.7	1.9	1.7
C14	2.9	2.4	2.3	2.7	2.7	2.3	2.6	2.5	2.4	2.2	2.6	2.2
C15	2.1	2.1	2.1	2.2	2.4	2.3	2.5	2.1	2.1	2.1	2.4	2
C16	1.4	1.4	2.1	1.7	1.2	1.4	1.3	2	1.4	1.2	1.7	1.3
C17	3.6	1.7	1.6	3.3	2.2	1.8	1.8	2.4	2.1	1.7	2.3	1.9
C18	2.3	2.6	2.8	2.5	4.5	3.3	2.8	2.7	2.1	2	1.9	4.1
C19	3.8	2.2	2	3.1	1.7	1.9	2.3	2.6	2	2.8	2.7	2.4
C20	2.2	2.3	3.1	2.4	2.3	2.3	1.7	2.1	1.8	3.3	1.9	4.6
C21	1.8	1.4	1.3	1.4	1.4	1.4	1.4	1.4	1.2	1.6	1.4	1.2

N = 37
Average standard deviation (root mean variance) 0.9968
Average standard error of means 0.17
C = construct
See Appendix 8 for full list of grid 2 elements & constructs
Note: 1 = positive pole 5 = negative pole

Table 8.6

Constructs	Components I	Components II
1. responsible for disorder/not		+
2. avoidable/not		+
3. preventable/not		*
4. should take responsibility for health/should not	+	
5. should become involved in care/should not	+	
6. could make sensible decisions/could not		
7. a lot can be done to help/can not	+	
8. nurses can do a lot/can not		
9. could help self/could not	*	
10. stress part of cause/not	+	
11. suffering from stress/not	+	
12. I could be like this/could not	-	-
13. I would enjoy nursing/would not		
14. my perceptions shared/not		
15. good person/bad person		-
16. should receive education/should not		
17. medical treatment important/not		
18. likely to improve/not	+	
19. very ill/not		
20. behaviour contributed/did not	+	+
21. deserves help/does not		

Contribution to variance of component I constructs = 47%
Constructs in order of contribution to variance
9,20,10,3,1,2,11,4,18,7,14,12,17,19,15,13,6,5,8,21,16

* denotes principal construct in component
+ denotes positive correlation with principal construct
- denotes negative correlation with principal construct

Elements	Components I	Components II
1. panic attacks	+	
2. heart attack	+	+
3. pneumonia		+
4. depression	+	
5. AIDS		*
6. lung cancer	+	+
7. liver failure & alcoholism	+	+
8. overdose of sleeping pills	+	
9. anorexia nervosa	*	
10. asthma	+	
11. attempted suicide	+	
12. multiple sclerosis		+

Elements in order of contribution to variance
9,2,8,11,7,6,10,4,1,5,12,3

* denotes principal element in component
+ denotes positive correlation with principal element

Patient Grid 2 was analysed in relation to the following broad questions of interest:

1. How similar were the average grids produced by each group, and in what particular ways did the grids differ?

To answer this, similarity was assessed by correlating pairs of grids across their cells. It was expected that the overall correlation between the groups with experience would be higher than that between the non experienced and experienced groups.

2. Which constructs contributed most to the overall variance within the grids? What proportion of the overall variance was accounted for by component I constructs? Were there similarities and differences between the groups in respect of these?

In relation to point 2 expectations were uncertain. One possibility was that component I constructs would contribute less to the grids' variance for the experienced groups than for the inexperienced groups, this being based on the assumption that knowledge and experience would increase the number of meaningful constructs used to discriminate amongst the patient elements.

However, if some patients were viewed in a negative light, another possibility was that lack of patient

contact would result in the comparison groups making greater discriminations than the experienced groups. Research based on Bieri's repertory grid measures of differentiation (1955) indicates that subjects discriminate more among negative figures than they do among positive. Miller and Bieri (1965) attempted to explain this in terms of their 'vigilance' hypothesis which postulated that individuals have a tendency to 'keep an eye' on negative figures in order to distance them, and that to do this effectively requires a degree of cognitive complexity in the construing of these figures.

If two years of patient contact and a psychosocial training programme had had the effect of making nurses more empathic and sympathetic towards all patient groups, then it is feasible that the experienced groups would make fewer negative discriminations than the comparison groups would.

3. What does GAB tell us about those patients the students enjoyed nursing and those they felt they could do a lot to help?

In relation to this point, it was anticipated that the new curriculum students would enjoy and feel they could do more to help those patients they construed as not being helped a lot by medical treatment, than could the old curriculum students. This was based on the assumption

that the increased psychosocial emphasis within their training would equip them better to carry out 'non-medical' nursing interventions.

4. What does the HICLAS analysis tell us about the relationship between elements and constructs, and the hierarchical structure of these relationships? Were there similarities and differences between the groups in respect of these?

HICLAS analysis was used primarily to produce a clearer profile, for each group, of construct element relationships.

8.1.1 Correlation between the average grids

This section addresses the first research question, which relates to the correlation between the average grids, and the particular ways in which the grids differed.

As for grids 1 and 1B, individually completed grids for each group were averaged and one representative grid produced for each group. The standard error of means for Grid 2 ranged from 0.15 to 0.22. Average grids are shown in Tables 8.1 to 8.6.

A correlation matrix for each of the average grids was then derived, correlating across the 21 x 12 cells.

Table 8.7

Matrix of correlations between Grid 2 group grids

	02	N3	N4	C8	C9
01	.919	.935	.921	.897	.909
02		.952	.914	.894	.924
N3			.931	.901	.939
N4				.878	.914
C8					.922

All significant at .001

It is notable how highly correlated the groups were in terms of their construing of patients and their care. The correlations between the groups with experience were not higher when they had followed the same curriculum. In contrast to this the correlations between the experienced groups and comparison group 8 were generally lower, but this did not hold true for comparison group 9. These correlations indicate that curriculum studied had no impact on grid correlations, and nursing experience also had very little impact.

Differences between the groups

As for Grid 1B, Unrotated Principal Components Analysis was used to identify those grid cells which differed most between the old, new and comparison groups. The two grids of each type were combined into a single averaged grid.

Those cells which differed most between the groups are listed in Table 8.8.

Tables 8.1 to 8.6 provide the average data for each group grid, allowing for the identification of the average construct rating in respect of each patient element.

Table 8.8

Difference Between Average Patient Grids 2

old versus new	old versus comparison	new versus comparison
O higher than new	*O higher than C*	*N higher than C*
C6, E1	C6, E3	C2, E3
C10, E10	C7, E5	C2, E4
C12, E7	C9, E5	C2, E9*
C18, E8	C9, E12	C2, E11*
C19, E5	C11, E5	C3, E3
	C11, E6	C3, E9*
	C11, E12	C3, E11
	C12, E2	C9, E7
	C12, E6	
	C12, E8	
	C12, E10	
	C12, E12	
N higher than O	*C higher than O*	*C higher than new*
C1, E11	C3, E1	C6, E3
C2, E9*	C3, E3	C6, E8
C2, E11*	C3, E4	C9, E12
C3, E8	C7, E7	C11, E6
C3, E9*	C9, E7	C11, E10
C9, E5	C13, E9	C11, E12
C12, E8	C13, E11	C12, E2
C12, E12	C18, E7	
C13, E2	C20, E3	
C13, E5		

O = old curriculum
N = new curriculum
C = comparison
* denotes new rate higher than both old and comparison

Grid 2 constructs

1. responsible for disorder/not
2. avoidable/not
3. preventable/not
4. should take responsibility for health/should not
5. should become involved in care/should not
6. could make sensible decisions/could not
7. a lot can be done to help/can not
8. nurses can do a lot/can not
9. could help self/could not
10. stress part of cause/not
11. suffering from stress/not
12. I could be like this/could not
13. I would enjoy nursing/would not
14. my perceptions shared/not
15. good person/bad person
16. should receive education/should not
17. medical treatment important/not
18. likely to improve/not
19. very ill/not
20. behaviour contributed/did not
21. deserves help/does not

Grid 2 elements

1. panic attacks
2. heart attack
3. pneumonia
4. depression
5. AIDS
6. lung cancer
7. liver failure & alcoholism
8. overdose of sleeping pills
9. anorexia nervosa
10. asthma
11. attempted suicide
12. multiple sclerosis

Old versus New

Table 8.8 demonstrates that the *old curriculum students* considered that the patient suffering from panic attacks (E1), was less likely to make sensible decisions about treatment (C6), than the new curriculum thought they were; that stress (C10), was less likely to be a cause of asthma (E10), and they were less likely to be like

someone suffering from liver failure and alcoholism (C12,E7). They also thought that the person who had taken an overdose of sleeping pills was less likely to improve than the new curriculum considered likely (C18,E8), and that a person suffering from AIDS was less likely to be very ill than the new curriculum considered them (C19,E5).

The *new curriculum students* considered a patient who had attempted suicide (E11), to be less personally responsible (C1) than the old curriculum considered them; they considered anorexia nervosa (E9), and attempted suicide (E11), as less avoidable (C2), and an overdose of sleeping pills and anorexia nervosa (E8,E9), as less preventable (C3). In addition the new curriculum students considered the AIDS patient (E5), less able to help themselves (C9); they considered themselves less like someone suffering from either an overdose of sleeping pills, or multiple sclerosis (C12,E8,E12), and were less likely to enjoy nursing the heart attack victim or the person suffering from AIDS (E2,E5,C13).

Summary

A number of differences emerged between the old and new curriculum students, some of which may not be robust or reliable. However, the most consistent theme related to personal responsibility for ill health, avoidability, and preventability. The new curriculum students appeared to

be less judgemental in regard to the application of these, to examples of ill health for which psychosocial causes could be considered to play a significant role, for example, anorexia nervosa and attempted suicide. It is possible that their training programme, with the increased emphasis on psychosocial aspects of ill health, had enabled them to have a greater understanding of the multicausal nature of ill health than the old curriculum students, and therefore be less 'blaming' in their construing of these patients.

Old versus comparison

Table 8.8 identifies differences between the construing of the old curriculum and the comparison groups. The main themes which emerged are summarised below.

The first of these themes related to the less optimistic view of patients held by the old curriculum students. They considered that the patient suffering from pneumonia (E3), was less likely to make sensible decisions (C6), that less could be done to help the patient suffering from AIDS (C7,E5), and that this patient was less likely to be able to help themselves (C9). They also considered that the patient suffering from multiple sclerosis was less likely to be able to help themselves than the comparison group imagined (E12,C9).

The second theme related to whether the students imagined they could be like particular patients. The old curriculum students considered themselves less likely than the comparison group, to be like (C12), those patients suffering from a heart attack, lung cancer, an overdose of sleeping pills, asthma, or multiple sclerosis (E2,6,8,10,12).

In addition to the above themes, the comparison group thought it less likely than did the old curriculum students, that panic attacks, pneumonia and depression are preventable (E1,E3,E4, C3). They also thought it less likely that much could be done to help (C7) the patient suffering from liver failure and alcoholism (E7), less likely that this patient could help themselves (C9), and less likely that the health of this patient would improve (C18).

Summary

The most notable aspect of the differences between the old curriculum students' and the comparison groups' construing in grid 2, related to the students' ability to identify as potentially like patients. With five out of twelve patients, the old curriculum students who have two years nursing experience, could not imagine being like the patient. This suggests that clinical experience resulted in the students distancing themselves from patients. Whether this was a feature of the comparison

between the new curriculum students and the comparison group is identified below.

New versus Comparison

As in their comparison with the old curriculum students, the new curriculum students again showed less judgemental attitudes in areas relating to the avoidability and preventability of ill health.

The new curriculum students considered it less likely than the comparison group, that pneumonia, depression, anorexia nervosa and attempted suicide, are avoidable (C2, E3,E4,E9,E11). They also considered pneumonia, anorexia nervosa, and attempted suicide, as less likely to be preventable (E3,E11,E7). However, they considered it more likely than the comparison students that the patients suffering from pneumonia and an overdose of sleeping pills could make sensible decisions about their treatment (E3,E8,C6), and also showed more awareness of the stress likely to be experienced by the patients suffering from lung cancer, asthma, and multiple sclerosis (C11,E6,E10,E12).

Summary

The above results provide a number of examples of the new curriculum students being more likely to consider patients as able to make sensible decisions about their

treatment than did either the old curriculum or comparison group students. There were also examples of the new curriculum students demonstrating a less 'blaming' attitude in terms of the cause of ill health, than either the old or comparison groups, and showing greater awareness of the stress patients are likely to be experiencing.

These findings suggest that increased knowledge of the psychosocial aspects of ill health, following the new curriculum teaching, could have influenced the students' construing in the above areas.

A further interesting area relates to the comparison group identifying more closely with almost half of the patients than did the old curriculum students. This difference did not, however, emerge between the comparison groups and the new curriculum students. This suggests that the psychosocial and experiential components of the new curriculum reduced the 'distancing' from patients which might otherwise have occurred as a result of nursing experience.

8.1.2 Contribution to variance of constructs

This section addresses the second research question listed in 8.1, relating to the contribution to variance of component I constructs, and similarities and differences between the groups. Each average Grid 2 was

analysed with the aid of the GAB computer programme (see chapter 7 for full description of this). The contribution to variance of component I (CVCI) constructs for each group, and constructs in order of contribution to variance, can be found in Tables 8.1 to 8.6. The CVCI scores are also listed below, alongside those for each of grids 1 and 1B for purposes of comparison.

Table 8.9

Grids 1, 1B and 2 contribution to variance of component I constructs

GROUP	*GRID 1 CVCI*	*GRID 1B CVCI*	*GRID 2 CVCI*
O1	-	70%	29%
O2	53%	62%	51%
N3	51%	73%	29%
N4	84%	57%	33%
C5	75%	-	-
C6	72%	-	-
C7	-	74%	-
C8	-	-	30%
C9	-	-	47%

NB. - indicates grid not completed

The CVCI scores ranged from 29% to 51%, with four of the scores being below 34%. One old curriculum group (O2) and one comparison group (C9) had scores above this, these being 51% and 47% respectively.

The most notable feature of these scores is that they were generally much lower than those for either grids 1 or 1B. There was no obvious relationship between curriculum studied and CVCI scores or between experience versus no experience and CVCI scores. The generally

higher discrimination shown in Grid 2 than in either Grids 1 or 1B supports the 'vigilance hypothesis' of Miller and Bieri (1965), if it is accepted that the nursing activities were viewed in either a neutral or generally positive light. If, in contrast, a number of the patients were viewed in a negative light, according to the hypothesis this would trigger greater discrimination amongst the elements and more complex construing. This complexity would be reflected in a lower CVCI score.

It is interesting to note that this greater 'complexity' existed independently of stage of training or curriculum studied, suggesting powerful external social influences on the judgement of patients.

Constructs in order of contribution to variance

The order in which the constructs contributed to the overall variance of each group grid can be found in Tables 8.1 to 8.6. The rank ordered list of constructs is remarkably similar for all groups. Constructs 20,1,2,13,& 3 featured as the first five constructs for both old curriculum groups, and 20,10,3,2,& 1 featured as the first five for both new curriculum groups and one comparison group. Constructs 20,10,3,& 1 featured in the first five for the other comparison group, but the

construct contributing most to variance for this group was C9.

Those constructs referred to above are listed below:

List of Constructs

C20 Person's behaviour did/did not contribute to ill health
C1 Person responsible/not
C2 Avoidable/not
C13 I would/would not enjoy nursing
C3 Preventable
C10 Stress part of cause/not
C9 Could/could not help self

Summary

Constructs to do with behavioural responsibility for ill health are clearly salient discriminators for all groups regardless of curriculum studied, or nursing experience. Construct 20 (behaviour contributed), contributed most to variance for five of the six groups. Nursing enjoyment featured more highly for both of the old curriculum groups than the others, whereas for the new curriculum and comparison groups, whether stress played a part in the cause featured more highly. For one comparison group whether a patient could help themselves featured as the construct contributing most to the grids overall variance.

Constructs 1,2,3,& 20 were consistently positively correlated and within the same component for each group (ie, they were significantly correlated). Construct 13 (I

would enjoy nursing) did not feature in component 1 for any of the groups, indicating that the extent to which people were construed as behaviourally responsible for their ill health, did not affect the degree to which the nurses thought they would enjoy caring for them.

The previous section in which the contribution to variance of component I scores was discussed suggested that Grid 2 scores could be generally lower than Grid 1 scores as a result of negative value judgements in relation to some of the patient elements. Identification of those constructs contributing most to variance for all groups supports this notion since the majority of them represent negative value judgements relating to behavioural responsibility.

The CVCI scores were generally low for all groups and did not reflect differences in curriculum or length of experience; the high contribution to variance for all groups, of constructs to do with behavioural responsibility, also did not reflect differences in curriculum or nursing experience. As with the CVCI scores, this again suggests the impact of external social influences on these particular aspects of construing. However, section 8.1 above demonstrated that the new curriculum appeared to have a small moderating effect on students' construing in areas relating to avoidability and preventability of ill health.

Discrimination amongst the elements

The ways in which the salient constructs were used to discriminate amongst the elements is shown in Tables 8.1 to 8.6. Since construct 20, (behaviour contributed) was the principal discriminator for five of the six groups, and second most important for the sixth, the way in which it was used to discriminate between the elements is described below.

For all groups, those examples of ill health for which the patient's behaviour was considered to have played the greatest part in the cause (as depicted by ratings of 2 or below) were, liver failure and alcoholism, anorexia nervosa, and attempted suicide. AIDS was included by one old curriculum group; and one new curriculum group included AIDS, and the person who took an overdose of sleeping pills.

Behaviour was considered to have contributed least (ratings of 3 and over) in relation to the patients suffering from pneumonia, asthma and multiple sclerosis.

8.1.3 Nurses' enjoyment and ability to help patients

The third Grid 2 research question related to those patients the students would enjoy nursing, and those they felt they could do a lot to help.

Section 8.1.2 above identified that nursing enjoyment was independent of whether people were construed as behaviourally responsible for their ill health or not. By referring to the average grid data in Tables 8.1 to 8.6 it is possible to identify those patients that the nurses would most enjoy nursing.

The first point to note is that ratings below 3, depicting enjoyment of nursing, were the norm for all patients. However, some patients were considered as more enjoyable to nurse than others. Taking ratings below 2 as representing the greatest enjoyment, the two old curriculum groups both included the patients suffering from multiple sclerosis, asthma, lung cancer, and a heart attack as the most enjoyable. One also included the patient suffering from pneumonia, and the other, AIDS. Group N3 (new curriculum) most enjoyed nursing the patients with multiple sclerosis, asthma, and the heart attack, whereas group N4 preferred nursing the patients with anorexia nervosa, multiple sclerosis, and the person who had attempted suicide (group N4 had no ratings below 2 but the lowest ratings ie. depicting greatest enjoyment, were given to those case examples cited above).

It is notable that only group N4 has given 'greatest enjoyment' ratings to patients with an obvious need for psychological interventions. Interestingly, however, both comparison groups included the patient suffering from

anorexia nervosa, and the person who attempted suicide. They both also included the patients with multiple sclerosis and asthma, with one also including the patient with lung cancer.

Summary

All groups enjoyed, or anticipated enjoying, caring for the patient with multiple sclerosis; also, nursing the patient suffering from asthma would generally be enjoyed by all. It is notable that the two comparison groups and one new curriculum group included 'psychological' case examples amongst those they most enjoyed, or anticipated enjoying, nursing, whereas the two old curriculum groups both included more patients with obvious physical needs, excluding those with clearly psychological care needs.

This result seems to indicate that the combination of two years experience and the old curriculum training programme, resulted in the students' having a clear preference for nursing those patients with clearly definable physical care needs. Whether enjoyment mirrored those patients the nurses felt most able to help is explored below.

Those patients nurses can 'do a lot to help'

Those patients that nurses considered they could 'do a lot to help', was explored in relation to 'enjoyment',

and whether 'medical treatment' was construed as important for the patient's recovery. All groups were generally optimistic that they could do something to help all patients (as reflected by ratings below three, see Tables 8.1 to 8.6), however, as with enjoyment, they considered that they could do more to help some patients than others.

An interesting feature of this relationship between constructs in terms of their applicability to specific elements, is that all groups reported high enjoyment in relation to nursing the patient with multiple sclerosis, whereas none of the groups rated this so highly in terms of how much they could do to help this patient. Having excluded multiple sclerosis, however, there was general similarity in terms of the patients they would enjoy nursing and those they felt they could do a lot to help.

It is interesting that this relationship coincided, for the old curriculum groups, with those patients for whom they considered medical treatment was important. This pattern also predominated for all other groups, although a few examples emerged of patients that the new and comparison group students felt they could help where they considered that medical treatment was less important, namely, in relation to the patients suffering from, anorexia nervosa (groups N3,N4 & C9), the patient who took an overdose of sleeping pills (N4), and the patient who attempted suicide (N4 & C9). There were also examples

of patients for whom medical treatment was felt important, but where they, the students, could do relatively little. Namely, the patient suffering from multiple sclerosis (O2,N3,C8,C9), liver failure and alcoholism (N3,N4,C9), and AIDS (O2,N3,N4). Only group O1 considered both that they could do a lot to help, and that medical treatment was important, for the patient suffering from lung cancer. The other groups felt that they could do relatively little to help this person, but that medical treatment was important.

Summary

Only the new curriculum and the comparison groups included patients with a primary psychological care need amongst those they felt they could do most to help. Within these they included a number of patients for whom they considered medical treatment as relatively less important.

It was notable that although all groups reported high enjoyment of nursing the patient with multiple sclerosis, this was not rated so highly in terms of the students being able to do a lot to help the patient. This could be because the students could identify no clearly defined role for themselves in relation to this patient, or because they felt lacking in appropriate skills for helping this person.

Linking these points to the other main findings in section 8.1 above, it has emerged that constructs to do with behavioural responsibility are salient discriminators for all groups. However, the new curriculum students were slightly less judgemental than the old curriculum groups in regard to the application of these to examples of ill health for which psychosocial causes could be considered to play a significant role.

A further difference between the groups related to the greater ability of the new curriculum and comparison students, to identify as being 'potentially like', patients. This suggests that aspects of the new curriculum are likely to have reduced the 'distancing' from patients which might otherwise have resulted from nursing experience, as manifest by the old curriculum students.

8.1.4 HICLAS analysis of Grid 2

HICLAS analysis of Grid 2 provides a simplified profile of the construct/element relationships depicted in Tables 8.1 to 8.6. Those constructs/elements with exactly the same profile are put together within a common class and the HICLAS structure shows the interrelationship of classes of constructs and elements. Full details of HICLAS analysis, and a worked example, are given in chapter 7 (7.2.4).

Aims of HICLAS analysis

The main aim of the HICLAS analysis was to provide a clear profile, for each group, of construct element relationships. Of particular interest was the profile it produced in terms of prototypical patients and core constructs. Prototypical patients were considered to be those to which all, or the majority, of the attributes applied. Core constructs (as in chapter 7 this term is not used in the Kellyian sense), were considered to be those which had a broad focus and applied to all or the majority of the elements.

In the section below similarities and differences between the groups are explored in relation to core constructs and prototypical patients. Figures 8.1 to 8.6 provide diagrammatic representation of HICLAS analyses of Grid 2 for each group.

Figure 8.1

Group 01
Grid 2, graphic representation of HICLAS structure.

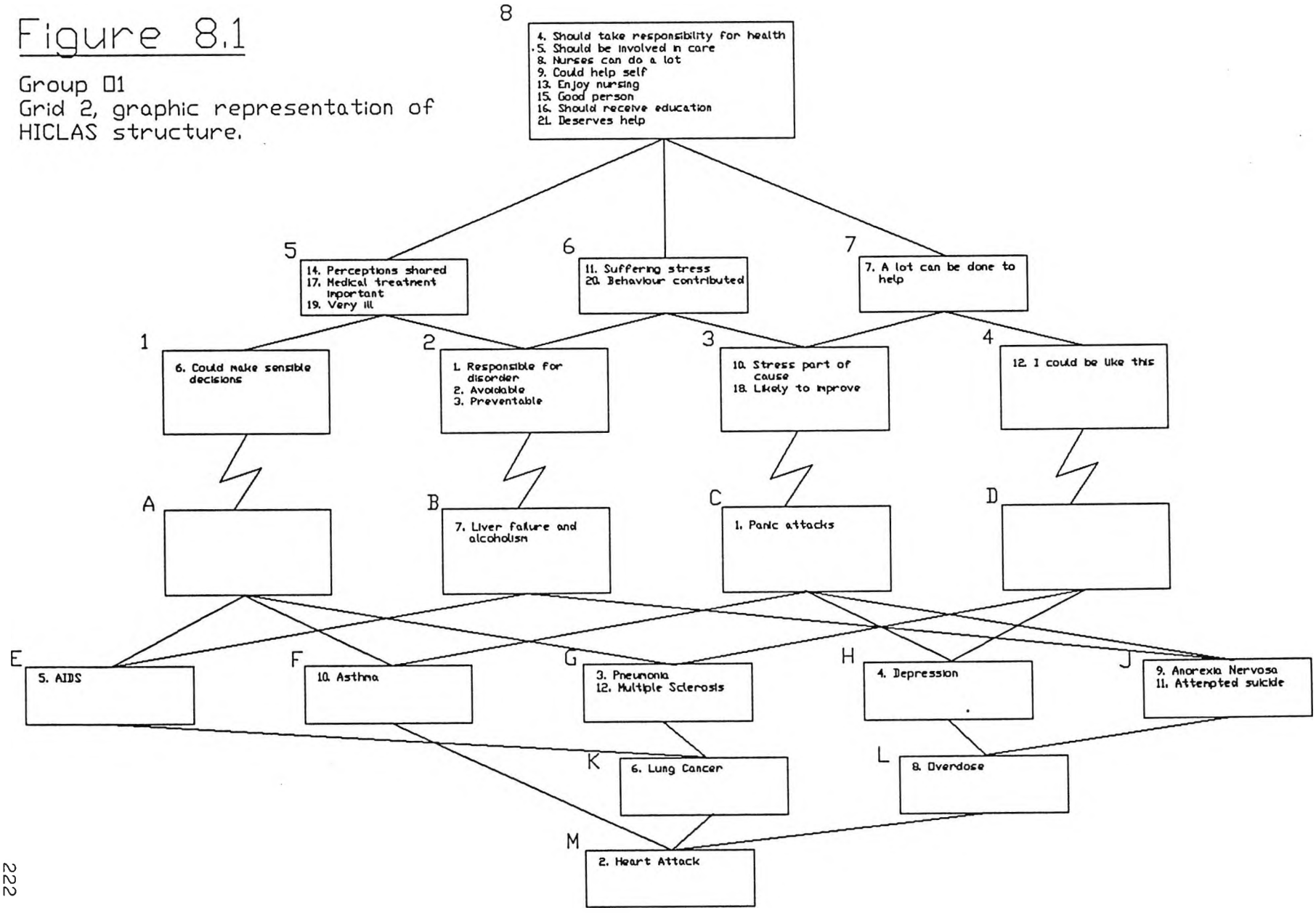


Figure 8.2

Group 02
Grid 2, graphic representation of HICLAS structure.

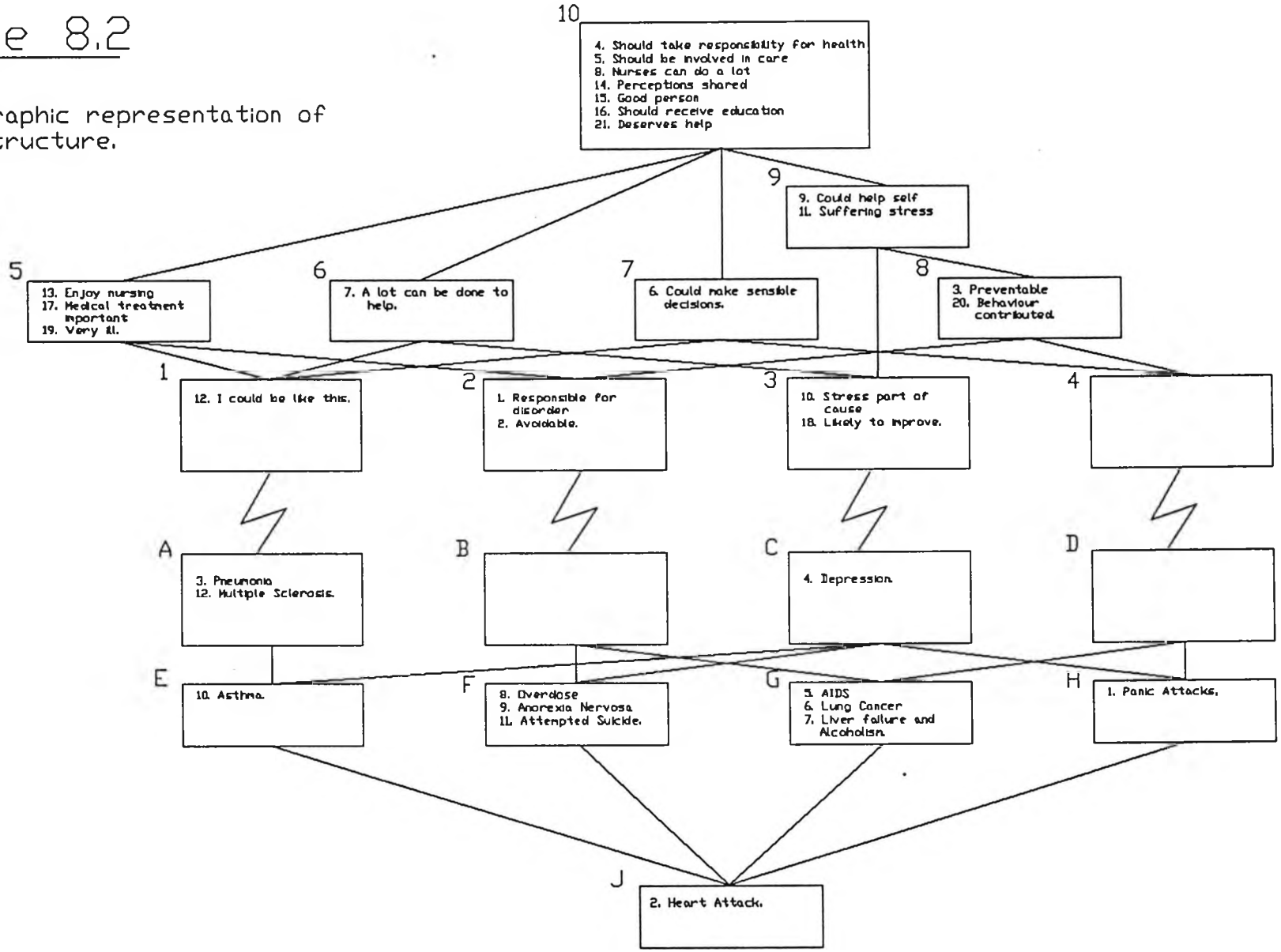


Figure 8.3

Group N3
Grid 2, graphic representation of HICLAS structure.

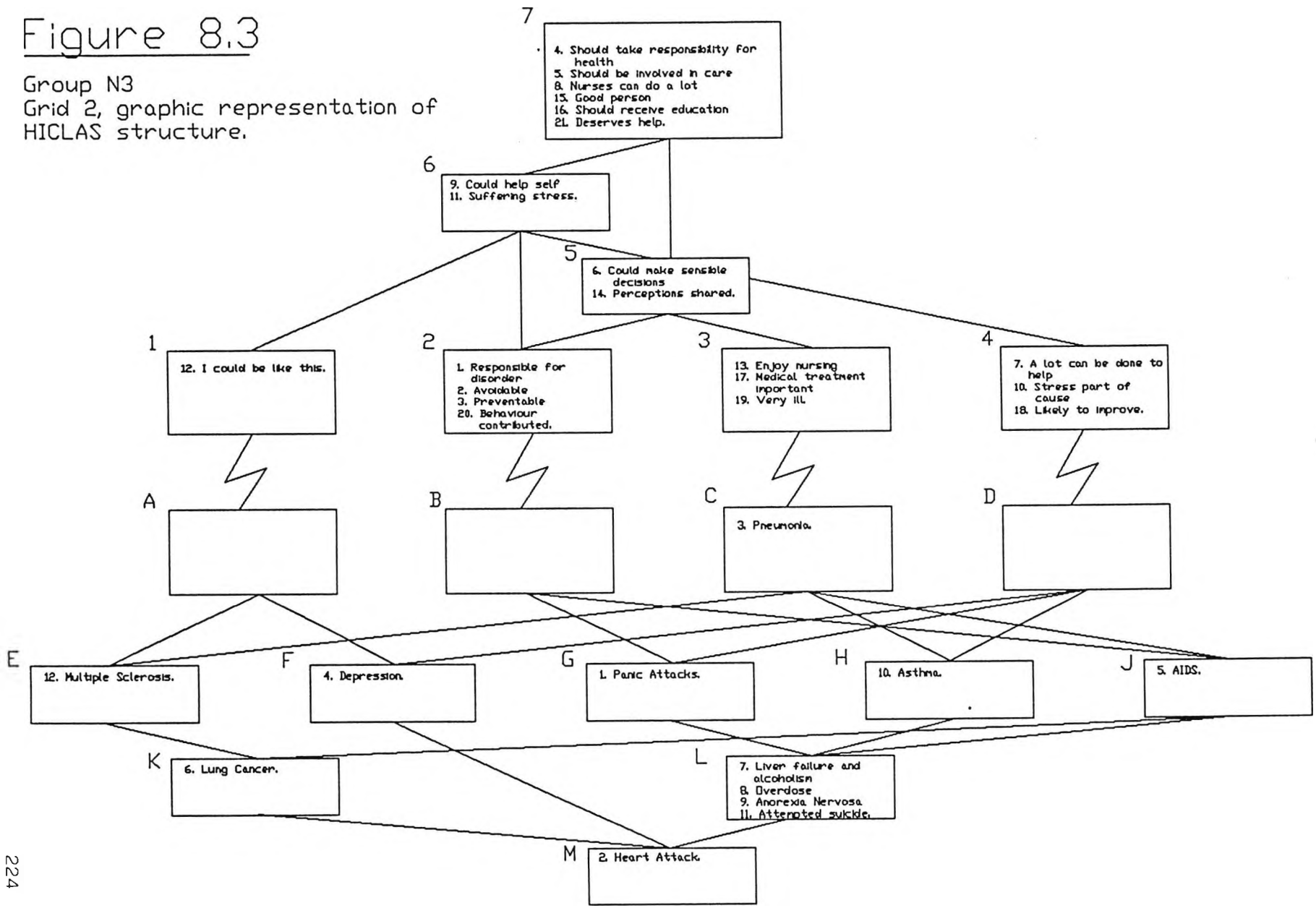


Figure 8.4

Group N4
Grid 2, graphic representation of HICLAS structure.

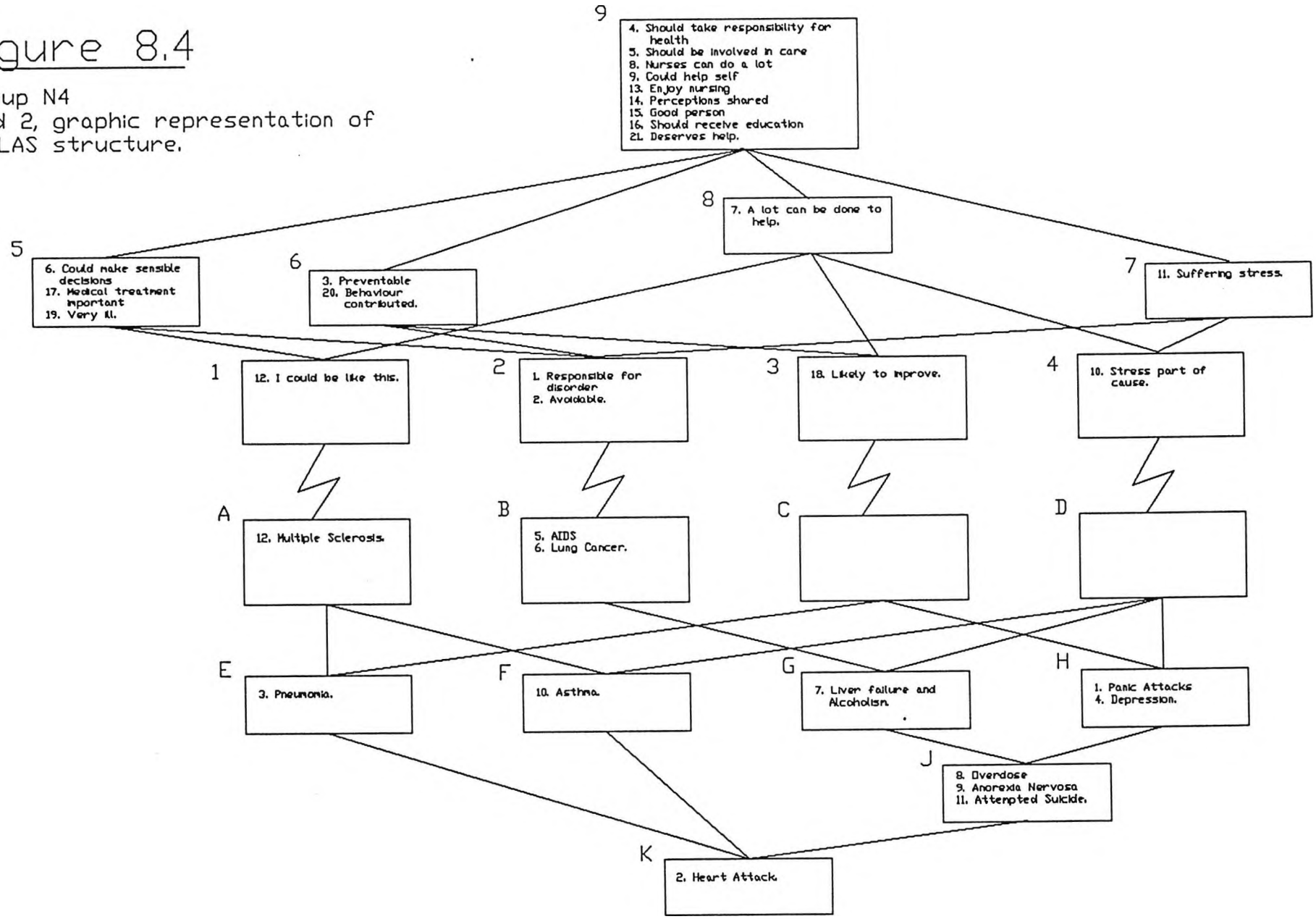


Figure 8.5

Group C8
Grid 2, graphic representation of HICLAS structure.

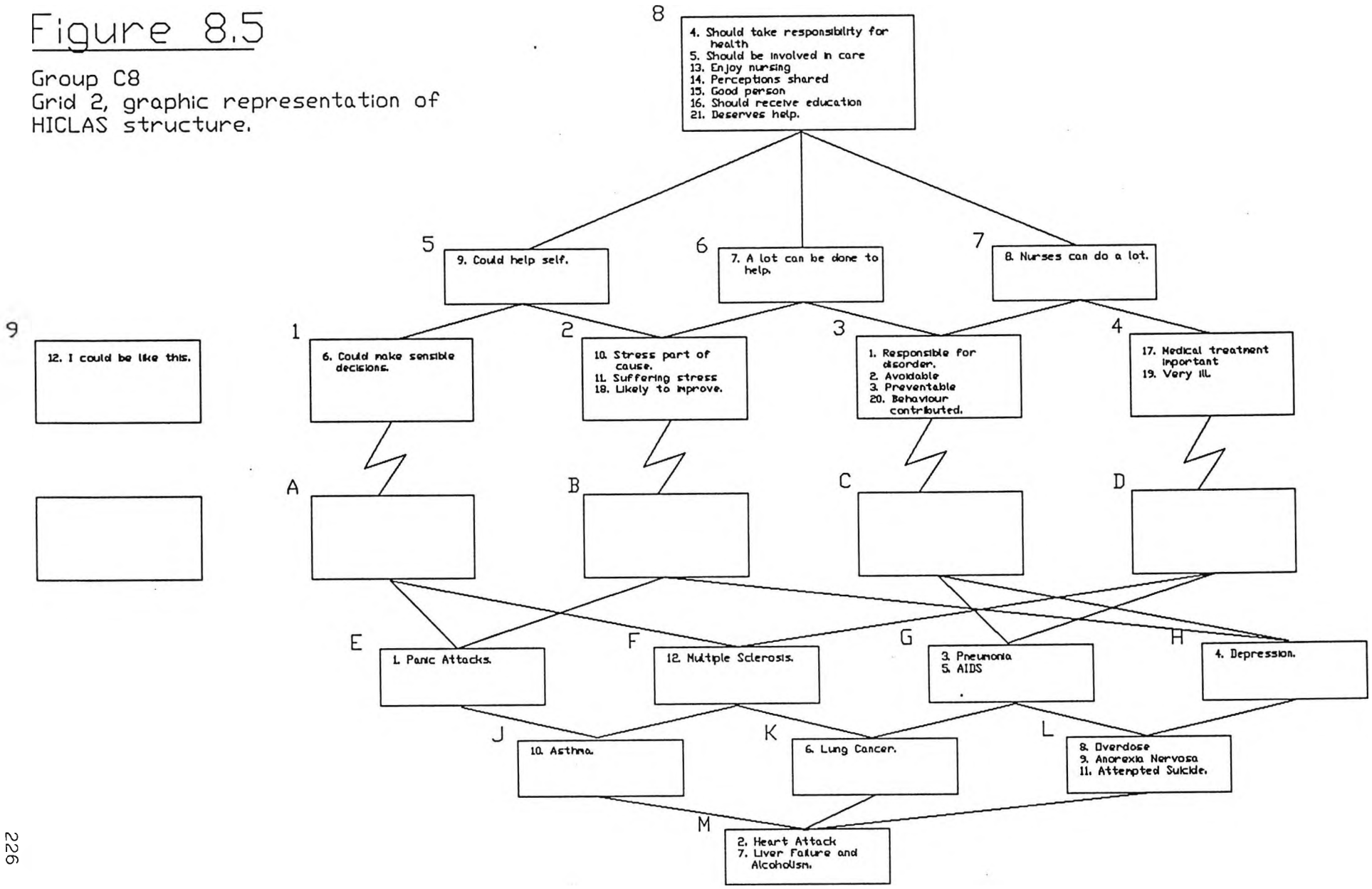
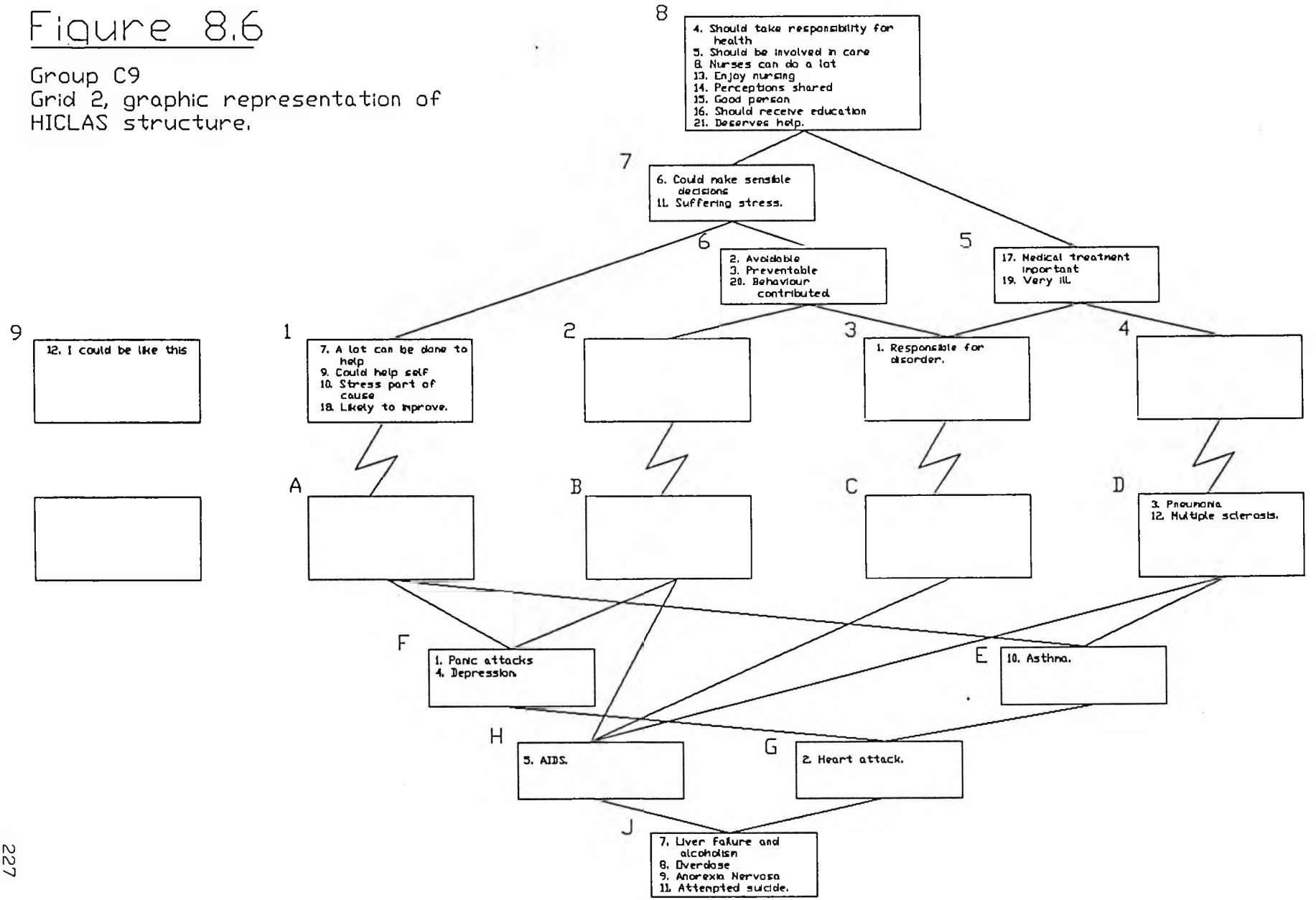


Figure 8.6

Group C9
Grid 2, graphic representation of HICLAS structure.



Similarities and differences between the groups

1. *Core constructs*

A number of core constructs, as defined by their application to all elements, emerged in the context of the HICLAS analysis. Both the number of core constructs and similarity between the groups are notable. For all groups constructs 4,5,15,16,& 21 are core and C8 is core for all but comparison group 8. However the only patient that this group did not consider they could do a lot to help, as depicted by a rating below 3, was the person suffering from a panic attack, for whom the average rating was 3. It was therefore considered as reasonable to include this construct within the list of shared core constructs. These constructs are listed below:

C4 person should be encouraged to take responsibility for health

C5 person should be encouraged to become involved in own care and treatment

C8 very likely nurses can do a lot to help this person

C15 is very likely a good person

C16 person should receive education concerning their condition and its treatment

C21 this person deserves a lot of help

Therefore for all groups, regardless of curriculum studied, or whether they were in the first week in school or had completed two years of training, defining characteristics of their construing of patients were that patients should take some responsibility for and become involved in their own care; they should receive education about their condition and its treatment; they were all 'good people' who deserved a lot of help; and nurses could do a lot to help all of them.

It must be remembered however, that it was identified within the previous section that nurses felt they could do a lot to help all patients, but could help some more than others. The old curriculum groups felt generally more able to help those patients for whom they considered medical treatment important, whereas the new curriculum and comparison groups included a number of patients for whom they considered medical treatment as relatively less important.

It is interesting to recall from chapter 7, that HICLAS analysis of Nursing Activity Grid 1B identified 'well qualified to carry out', as a core, or general characteristic of the nursing activities. Examination of each group's average ratings (Tables 7.7 to 7.11) identified, however, that the students felt generally less well qualified in relation to carrying out 'psychosocial' nursing activities.

Feeling well qualified, and being able to do a lot to help patients, are both likely to be significant within the context of acquiring and maintaining a satisfying professional image. However, the impact of this upon the recognition of personal and professional learning needs is an area for further investigation.

In contrast to the core constructs listed above, constructs to do with personal responsibility for ill health, and whether the nurse could be like the patient, feature in the centre of each structure, denoting they are used by all groups to differentiate between the patients.

Prototypical patients

A fairly complex structure emerged for all groups in relation to the patient elements. Interestingly, the patient who had suffered a heart attack was prototypical* for all of the groups with two years nursing experience. It was not exactly like any of the other elements, but had characteristics in common with each of them, and had all of the attributes applying to it. One comparison group (C8) had the patient who had suffered a heart

* 'Prototypical' is not being used in the Rosch (1975) sense, except where the constructs are all positively correlated, which would indicate a high contribution to variance of component one constructs. The term 'prototypical' is used to refer to those elements to which the widest range of constructs apply, and the term 'core' refers to those constructs to which the widest range of elements apply.

attack, and the patient with liver failure and alcoholism, in the prototypical category, whereas the other comparison group (C9) included four patients in this group; namely the patients suffering from liver failure and alcoholism, an overdose of sleeping pills, anorexia nervosa, and attempted suicide.

This result suggests that nursing experience has had the effect of reducing the number of patients to whom all of the attributes apply and also influenced the choice of patient within this category. It must be noted, however, that the patient who had suffered a heart attack was also one of the two in the prototypical category for group C8.

Summary

HICLAS demonstrated, for all groups, a complex pattern of construing patients. The experienced groups saw fewer patients as prototypical than did either of the comparison groups, but there was considerable similarity between all groups in terms of central or core constructs. These constructs could be referred to as defining characteristics of nurses' construing, as depicted by these particular groups, and arguably linked to the professional identity of the students. Patients were seen as good people who deserved care; they were encouraged and educated to take an active part in their own care; and all student groups were optimistic about their own 'helpful' role in relation to patients,

although, as pointed out above, the degree of helpfulness varied depending on the type of patient.

The section below highlights the main features of Patient Grid 2B and relates them to the main themes emerging from the analyses of Nursing Activity Grids 1 and 1B, and Patient Grid 2.

8.2 Analysis of Patient Grid 2B

Patient Grid 2B was completed by four groups of student nurses: One old curriculum group (O2), two new curriculum groups (N3 and N4), and one comparison group (C7) (see Tables 8.10 to 8.13). The new and old curriculum groups completed the grid in a study block after three years of training. The comparison group completed it during their first week in the college of nursing.

Like Grid 2, grid 2B had 'patient' elements, and constructs which related broadly to patient attributes and their care. It was, however, considerably shorter than grid 2, and designed primarily to test the consistency of themes emerging within the context of grids 1, 1B and 2.

Table 8.10
Group O2, 'Patient' Grid 2Bi

	Elements							
	1	2	3	4	5	6	7	8
C1	3.3	2	3.1	2.4	2.2	2.5	2.8	1.9
C2	1.2	1	1.2	1	1	1.1	1	1.1
C3	2.4	3.3	2.4	2.4	2.8	2.8	2.3	3.7
C4	3	1.9	2.7	3.1	1.6	2.1	3.4	1.2
C5	1.7	1.2	1.9	1.7	1.6	1.7	2.2	1.3
C6	2.7	1.8	2.3	2.6	2.1	3.2	3.2	2.4
C7	1.2	1	1.2	1	1.1	1	1.1	1
C8	1.5	1.4	1.4	1.4	1.8	1.4	1.4	2.2
C9	1.3	1.9	1.7	1.6	1.9	1.2	1.4	2.8

N = 18
Average standard deviation (root mean variance) 0.9574
Average standard error of means 0.23
C = construct
See Appendix 9 for full list of grid 2Bi elements & constructs
Note: 1 = positive pole 5 = negative pole

Constructs	Components I	Components II
1. I enjoy nursing/do not	*	
2. communication important/not		
3. nursing people with this stressful/not	-	+
4. training prepared me well/has not	+	-
5. nurses can do a lot to help/can not	+	
6. I could suffer from this/could not		
7. patients need educating/do not	+	
8. social factors part of cause/not		+
9. behavioural factors part of cause/not		*

Contribution to variance of component I constructs = 67%
Constructs in order of contribution to variance
1,3,4,9,5,8,7,6,2,

* denotes principal construct in component
+ denotes positive correlation with principal construct
- denotes negative correlation with principal construct

Elements	Components I	Components II
1. panic attacks	+	
2. coronary heart disease		+
3. depression	+	
4. AIDS	*	
5. lung cancer		*
6. liver failure & alcoholism	+	+
7. anorexia nervosa	+	
8. asthma		+

Elements in order of contribution to variance:
4,3,6,7,1,5,2,8
* denotes principal element in component
+ denotes positive correlation with principal element

Table 8.11
Group N3, 'Patient' Grid 2Bi

	Elements							
	1	2	3	4	5	6	7	8
C1	3.6	2.2	3.6	2.1	2.1	2.4	2.9	2.5
C2	1.2	1.4	1.2	1.2	1.3	1.3	1.2	1.4
C3	2.1	3.2	2.1	2.3	2.7	2.7	2.2	3.3
C4	3.7	1.7	3.4	3.5	2	2.6	3.9	1.7
C5	2.3	1.6	2.2	1.9	1.8	2.1	2	1.5
C6	2.4	2	2.4	2.9	2.1	2.7	3.7	2.8
C7	1.8	1.2	1.9	1.3	1.4	1.3	1.3	1.3
C8	1.7	1.5	1.3	1.4	2.1	1.5	1.6	2.6
C9	1.3	2.3	1.6	1.7	2.3	1.5	1.3	2.9

N = 35
Average standard deviation (root mean variance) 1.0067
Average standard error of means 0.17
C = construct
See Appendix 9 for full list of grid 2Bi elements & constructs
Note: 1 = positive pole 5 = negative pole

Constructs	Components I	Components II
1. I enjoy nursing/do not		*
2. communication important/not	+	
3. nursing people with this stressful/not	*	
4. training prepared me well/has not	-	
5. nurses can do a lot to help/can not	-	+
6. I could suffer from this/could not		
7. patients need educating/do not		+
8. social factors part of cause/not		
9. behavioural factors part of cause/not	+	

Contribution to variance of component I constructs = 73%
Constructs in order of contribution to variance
3,4,2,5,9,1,7,8,6

* denotes principal construct in component
+ denotes positive correlation with principal construct
- denotes negative correlation with principal construct

Elements	Components I	Components II
1. panic attacks	+	
2. coronary heart disease		+
3. depression	+	
4. AIDS	+	
5. lung cancer		*
6. liver failure & alcoholism	*	
7. anorexia nervosa	+	
8. asthma		+

Elements in order of contribution to variance
6,7,4,1,3,5,2,8,
* denotes principal element in component
+ denotes positive correlation with principal element

Table 8.12
Group N4, 'Patient' Grid 2Bi

	Elements							
	1	2	3	4	5	6	7	8
C1	2.6	2.1	2.3	1.9	2.6	2.5	2.4	1.8
C2	1	1.2	1	1.1	1.2	1.2	1	1.2
C3	2.8	2.7	2.9	2.6	2	2.6	2.4	3.1
C4	2.9	2	2.5	2.9	1.9	2.3	2.8	1.7
C5	1.6	1.5	1.9	1.7	1.7	1.6	1.3	1.3
C6	2.1	1.8	2.1	2.3	2.6	3.4	3.2	2.8
C7	1.4	1	1.4	1	1.1	1	1	1.1
C8	1.5	1.5	1.3	1.8	1.5	1.4	1.3	2.5
C9	1.4	2	1.4	1.3	1.5	1.1	1.3	2.7

N = 10
Average standard deviation (root mean variance) 0.8593
Average standard error of means 0.29
C = construct
See Appendix 9 for full list of grid 2Bi elements & constructs
Note: 1 = positive pole 5 = negative pole

Constructs	Components I	Components II
1. I enjoy nursing/do not		*
2. communication important/not		
3. nursing people with this stressful/not		
4. training prepared me well/has not	-	
5. nurses can do a lot to help/can not		
6. I could suffer from this/could not		
7. patients need educating/do not		
8. social factors part of cause/not	+	-
9. behavioural factors part of cause/not	*	

Contribution to variance of component I constructs = 46%
Constructs in order of contribution to variance
9,8,1,2,4,7,5,3,6

* denotes principal construct in component
+ denotes positive correlation with principal construct
- denotes negative correlation with principal construct

Elements	Components I	Components II
1. panic attacks	+	+
2. coronary heart disease		*
3. depression	+	+
4. AIDS	+	+
5. lung cancer	+	
6. liver failure & alcoholism	+	
7. anorexia nervosa	*	
8. asthma		+

Elements in order of contribution to variance
7,1,3,6,4,5,2,8
* denotes principal element in component
+ denotes positive correlation with principal element

Table 8.13
Group C7, 'Patient' Grid 2Bii

	Elements							
	1	2	3	4	5	6	7	8
C1	2.7	2	2.5	2.7	2.4	2.3	2.2	2.1
C2	1	1.7	1	1.3	1.7	1.2	1.1	1.7
C3	2.2	2.5	2.5	2.1	2.5	2.4	2.2	2.6
C4	2.1	1.5	2	2	1.6	1.5	2	1.6
C5	1.7	2	1.7	2.2	2.1	1.9	2	1.9
C6	2.6	3	2.5	3.4	3	3.6	4	3.7
C7	1.2	1.3	1.3	1.4	1.7	1.1	1.1	1.3
C8	1.5	1.8	1.3	1.7	1.6	1.2	1.3	2.8
C9	1.6	2.2	1.7	1.6	2	1.4	1.5	3.2

N = 24
Average standard deviation (root mean variance) 0.9165
Average standard error of means 0.19
C = construct
See Appendix 10 for full list of grid 2Bii elements & constructs
Note: 1 = positive pole 5 = negative pole

Constructs	Components I	Components II
1. I enjoy nursing/do not		
2. communication important/not	*	
3. nursing people with this stressful/not		*
4. training prepared me well/has not	-	
5. nurses can do a lot to help/can not		
6. I could suffer from this/could not		
7. patients need educating/do not		
8. social factors part of cause/not		
9. behavioural factors part of cause/not	+	

Contribution to variance of component I constructs = 46%
Constructs in order of contribution to variance
2,9,3,4,1,8,7,5,6,

* denotes principal construct in component
+ denotes positive correlation with principal construct
- denotes negative correlation with principal construct
Note: constructs reflect anticipations

Elements	Components I	Components II
1. panic attacks	+	
2. coronary heart disease	+	+
3. depression	+	
4. AIDS	+	
5. lung cancer	+	
6. liver failure & alcoholism	*	
7. anorexia nervosa	+	
8. asthma		*

Elements in order of contribution to variance
6,7,4,5,2,3,1,8
* denotes principal element in component
+ denotes positive correlation with principal element

As with the previous grids, Grid 2B was analysed in relation to a number of broad questions of interest. These were as follows:

1. How similar were the average grids produced by each group, and in what particular ways did the grids differ? Similarity was assessed by correlating pairs of grids across their cells. It was expected that the overall correlation between the groups with experience would be higher than that between the non experienced and experienced groups. This expectation was tempered, however, by the results of grid 2 in which no meaningful correlation differences emerged between the pairs of groups.

2. What does the GAB tell us about those patients the students enjoyed nursing, those they felt they could do a lot to help, and how well their training had prepared them? It was expected that there would be some consistency between grid 2B results and the themes which had emerged within grids 1, 1B and 2 in respect of the above points.

NOTE The contribution to variance of component I (CVCI) constructs was also looked at (see Tables 8.10 to 8.13) but will not be reported here as it is not considered robust or particularly meaningful in view of the small grid size and low number of participating groups.

Similarities and differences between the groups.

8.2.1 Correlation between the average grids

This section addresses the first research question, which relates to the correlation between the average grids, and the particular ways in which the grids differed.

As for grid 2, individually completed grids for each group were averaged and one representative grid produced for each group. The standard error of means for each group ranged from 0.17 to 0.29. Average grids are shown in Tables 8.10 to 8.13.

A correlation matrix of the average grids was then derived, correlating across the 8 x 9 cells.

Table 8.14

Matrix of correlations between Grid 2 group grids

	N3	N4	C7
O2	.927	.906	.736
N3		.847	.68
N4			.782

All significant at .001

It is interesting to note that the correlations between the experienced groups and the comparison groups are consistently lower than those between the experienced groups, indicating that three years nursing experience had some impact on construing. However, there is still considerable similarity between the groups.

Differences between the groups

As for grid 2, Unrotated Principal Components Analysis was used to identify those cells which most differed between the old, new and comparison groups. The two new curriculum grids were combined into a single average grid. Cell differences are listed in Table 8.15. Tables 8.10 to 8.13 provide the average data for each group grid, allowing for the identification of the average construct rating in respect of each patient element.

Table 8.15

Difference Between Average Patient Grids 2B

old versus new	old versus comparison	new versus comparison
O higher than new	*O higher than C*	*N higher than C*
C1, E4	C3, E8	C4, E1
C3, E5	C4, E4*	C4, E3
C5, E7	C4, E7*	C4, E4*
C6, E1		C4, E6
		C4, E7*
N higher than O	*C higher than O*	*C higher than N*
NONE	C6, E2+	C6, E2+
	C6, E8	

O = old curriculum
N = new curriculum
C = comparison

* denotes both old and new rate higher than comparison

+ denotes comparison rate higher than both old and new

Grid 2B constructs

1. I enjoy nursing/do not
2. communication important/not
3. nursing people with this stressful/not
4. training prepared me well/has not
5. nurses can do a lot to help/can not
6. I could suffer from this/could not
7. patients need educating/do not
8. social factors part of cause/not
9. behavioural factors part of cause/not

Grid 2B elements

1. panic attacks
2. coronary heart disease
3. depression
4. AIDS
5. lung cancer
6. liver failure & alcoholism
7. anorexia nervosa
8. asthma

NOTE: comparison students completed an anticipatory grid, for example construct 1 - I *anticipate* enjoying. See Appendix 10 for full version of grid 2Bii.

Summary of differences

In view of the small size of grid 2B and its completion by only four groups of students most of the differences emerging from the Unrotated Principal Components Analysis are not likely to be robust or reliable. However, one prominent theme did emerge.

The new curriculum group considered that their training had prepared them less well (C4) than was anticipated by the comparison group, to nurse people suffering from, panic attacks, depression, AIDS, liver failure and alcoholism, and anorexia nervosa (elements 1,3,4,6,7). In addition the old curriculum group considered that their training had prepared them less well than was anticipated

by the comparison group to nurse the patients suffering from AIDS and Anorexia Nervosa. This suggests that the comparison group were optimistic, relative to the experienced groups in terms of how well their training would prepare them to nurse these patients. It is interesting to note, however, that the new curriculum students were more critical of their preparation in relation to a larger number of patients than were the old curriculum group.

It is also interesting to note that the patients in relation to whom the experienced students felt less well prepared than was anticipated by the comparison group, were all those for whom psychological care needs would be paramount.

8.2.2 Preparation for, and enjoyment of, nursing, and ability to help patients.

The second research question related to those patients the students enjoyed nursing, and how well their training had prepared them for different kinds of nursing care. Whether or not the findings were consistent with those which had emerged from grids 1 and 2 was of particular interest.

Preparation

Section 8.2.1 has already identified that the new curriculum students were more critical than the old curriculum students of how well their training had prepared them to nurse patients with primary psychosocial care needs. Tables 8.10 to 8.13 show that all groups felt (or anticipated feeling) least well prepared in relation to nursing the patients suffering from panic attacks, depression, AIDS, and anorexia nervosa (E's 1,3,4,7).

For all four groups there was an inverse relationship between behavioural factors being construed as part of the cause of ill health, and how well prepared the students felt to care for these patients. Behaviour, depicted by ratings below three, was considered by all groups, to be part of the cause of ill health for all patients. However, it was considered that behavioural factors had the greatest contribution to the cause of ill health in relation to patients 1,3,4,6 and 7 (panic attacks, depression, AIDS, liver failure and alcoholism, and anorexia nervosa).

Enjoyment

It is notable, that for all groups, as with grid 2, enjoyment of nursing was independent of whether behavioural factors were construed as part of the cause of the ill health. Enjoyment ratings were generally below

three, depicting enjoyment of nursing, although groups O2 and N3 gave ratings over three to the patients suffering from depression, and panic attacks.

Ability to help

As with grid 2, all groups reported being able to do a lot to help all patients (as depicted by ratings below 3), thus reinforcing the notion of 'being able to help' as a 'core' or defining characteristic of nursing, for these students.

8.2.3, Linking results to Grids 1 and 1B

The above results are broadly consistent with those emerging from grids 1 and 1B. These are briefly outlined below, as a reminder to the reader, before progressing to a fuller discussion of the results in the following chapter.

Nursing Activity Grids 1i to 1v, completed after eight months of training for the old and new curriculum students, and in the first week of training for the comparison students, demonstrated that all groups enjoyed/anticipated enjoying, those activities with a primary emphasis on interpersonal communication. However, the new curriculum groups rated the value of these activities more highly than the old curriculum group, and

also reported less stress in relation to carrying them out.

Nursing Activity Grid 1B identified the similarities which existed between the new and the old curriculum groups after three years of training. In spite of the increased emphasis in the new curriculum programme on psychosocial aspects of care, all groups, including the comparison group, valued this area of activity. However, apart from administration, psychological care was rated as the least well prepared area of activity, and also the most stressful.

A number of differences did emerge between the groups, however, in respect of specific grid cell ratings. For example, the new curriculum students were more critical of the limitations relating to documentation of psychosocial activities than were the old curriculum students, and also reported more involvement in rehabilitation of patients. These students were, however, more likely to be stressed by specialized and technical procedures than the old curriculum students.

The comparison students demonstrated considerable optimism about their future training and practical experience, anticipating fewer time constraints upon psychosocial activities, and better preparation for these than either of the experienced groups had reported.

HICLAS analysis of grid 1B

It was highlighted earlier in the results, that in spite of psychological care being rated as the least well prepared area of activity, if administration was removed from the list of nursing activities, HICLAS analysis of grid 1B depicted all groups as well prepared to carry out all of the activities. This is consistent with the students' report of being able to do a lot to help all of the patients. Possible implications of these aspects of the students construing will be discussed further in the discussion chapter in relation to disjuncture and learning.

The following chapter draws together the results of this study and discusses them in relation to the theoretical perspectives developed in earlier chapters.

CHAPTER 9

Discussion

9.1, Introduction

In this chapter the themes developed in the earlier parts of the study are reviewed and the results are related to these. This is followed by a discussion of methodological issues arising from the study.

The study was prompted by a change in curriculum for Registered General Nurse (RGN) students in one particular college of nursing, and also considerable national change relating to the preparation of nurses for practice. The primary focus of the research was on the impact of curriculum change on student nurses' construing of patients and their care. However, there was also a major interest in exploring theoretical issues relating to the dialectic between construing as a personal or as a social act, the ideological dimensions of construing, dilemmatic aspects of ideology, inconsistency incongruity and learning. Therefore, as well as the results having specific relevance for nurse education, they also have relevance for professional education in general.

Before discussing the results in relation to the above themes the earlier parts of the study are reviewed.

Chapter 1 introduced the constructivist theoretical perspective underpinning the study which is based on the notion that people are active meaning makers and construct a personal 'reality'. The debate concerning the degree to which meanings are personally or socially constructed was highlighted and the idea of people as 'competent negotiators of reality' was introduced (Potter & Wetherell, 1987).

In chapter 2 changes in the content and structure of nurse education were reviewed and dilemmas associated with assessing the impact of curriculum change on students' learning were discussed. The role of nursing models in relation to the process of nursing was considered and it was concluded that in spite of the use of nursing models and extensive procedural guide-lines, nurses' attitudes were likely to have a major impact on their practice.

The above conclusions prompted, in Chapter 3, a review of literature relevant to social cognitions and health. Attributional approaches to understanding helping relationships were discussed and the relationship between values attitudes and beliefs, and their relevance for understanding health related behaviours were explored. The tension between construing a person's values, attitudes and beliefs as personally or socially constructed was debated and the role of the individual in the construction of meaning returned to.

The notion of individuality was considered within the context of learning and it was suggested that active construction and meaning making requires active questioning. The work of Jarvis (1987, 1992) was referred to along with his proposition that it is the recognition of incongruity between belief and experience that results in the start of the learning process for the individual.

These ideas were further explored in chapter 4 in relation to the work of George Kelly and his personal construct theory (1955). Kelly's views on psychological research and repertory grid technique were explored and related to more recent work on cognitive complexity and interpersonal communication. It was suggested that nurses' and other helpers' interpersonal communications are influenced not only by their potential for construing the client in a complex way but also by their implicit value judgements. The interface between construing as a personal and as a social act was again acknowledged, this linking with the main theme of chapter 5 which related to the ideological dimensions of construing.

The notion of 'shared representations' was introduced in chapter 5 along with discussions relating to the impact of culture and ideology upon an individual's thinking and learning processes. It was suggested that we live in a world in which unreflective following of routines and deliberative thought and action may co-exist and that

contradictions or inconsistency within construct systems may also exist. To illustrate this it was suggested that illness has the capacity to bring out both compassion and avoidance in others since constructs to do with health and illness are likely to reflect both individual biography and ideological practices for controlling health and sickness. It was considered that nurses were unlikely to be immune to prevailing ideologies and that their practices were likely to be influenced by a combination of factors including personal, social and professional dimensions.

Chapter 6 outlined the research methodology used in the study. It was designed to be consistent with a constructivist theoretical perspective; to be capable of identifying similarities and differences in the construing of different groups of student nurses; and to facilitate exploration of ideas relating to shared representations, ideology, incongruity and learning.

9.2, Similarities and differences between the groups

In this study the construing of different groups of student nurses in the same college of nursing were compared and contrasted. The students had followed either an 'old' RGN curriculum, a 'new' RGN curriculum, or were in their first week in the college of nursing.

Similarities and differences between the groups were described in detail in chapters 7 and 8. The most notable features of these results were as follows.

All groups valued psychosocial aspects of nursing highly, although there was evidence of them feeling least well prepared in these areas of care. The new curriculum groups appeared more critical than the other groups of their preparation in relation to psychosocial nursing care and also the nursing documentation of these areas. It was suggested that their increased knowledge of these areas, resulting from the content of the new curriculum programme, caused them to be more critically aware of the disjuncture between theory and practice in relation to psychosocial aspects of care.

It was also suggested, however, that the level of disjuncture appeared to be modified by the existence of 'professional' constructs indicating that the students felt sufficiently well prepared to nurse all types of patients and engage in both medical and psychosocial aspects of nursing care.

One notable feature of the results was that although a number of differences did emerge between the groups, there were also areas of considerable similarity in construing and the overall grid correlations were very high. The similarity between the experienced groups could perhaps be accounted for by shared clinical placements

and the facts that in spite of some curriculum changes there were also curriculum similarities, and that the same teaching staff were involved in teaching all groups.

The construing of the comparison groups with no experience was, however, also highly correlated with that of the experienced groups. Where the 'shared construing' related to nursing activities this suggests that the new students had a good idea before they started nursing of what they were likely to be doing as student nurses. Similarity among all groups could reflect a general 'cultural' construing of nursing, or reflect a way of construing nursing common to those who choose, and then are accepted, to follow nurse training.

Where the construing related to discrimination between different types of patients the picture was less clear. For example, all groups demonstrated what could be construed as a 'blaming' attitude towards patients whose ill health was considered to be caused by their behaviour. Constructs to do with personal responsibility and behavioural causation were highly correlated for all groups and were also salient discriminators between the patient elements. Interestingly, however, all groups also held what could be construed as a 'professional' construct that all patients deserved care.

The co-existence of these aspects of construing reinforces the likelihood of construing being influenced

by a variety of sources, reflecting for example professional influence and a broader socio-political influence. It is interesting to note, however, that the results reported in chapter 8 indicate that linking behavioural causation for ill health with personal responsibility, although a feature of the construing of all groups, appeared less prominent for the new curriculum groups. It was suggested that the change in curriculum may have modified their 'blaming' of patients by introducing them to alternative ways of construing behavioural causation of ill health. For instance, behaviour may be construed as totally the responsibility of the individual, or influenced also by social and environmental factors.

Summary

In summary, the results suggest that the new curriculum did have some impact on the construing of the student nurses, but they also demonstrate a considerable degree of shared construing between all groups. The implication of this is that the new curriculum had only a minimal influence on the construing of the student nurses.

9.3, Linking Results to Theoretical Perspectives

The results of the study are discussed below in relation to the main themes identified earlier in this chapter.

The constructivist perspective

The essence of a constructivist perspective is that people are active meaning makers and construct a personal reality in relation to internal and external experiences. 'What is observed is not revealed but only construed' (Kelly, 1969a). The ideas presented within this study reflect meanings constructed by the researcher and do not reflect an objective reality. An attempt has been made to be logical and consistent but as Kelly (1969b) wrote, '... the canons of logic have failed to capture the ingenuities of man...' It is therefore hoped that the reader has read and will continue to read this work with caution and will re-construe aspects of the study in ways which fit with their own knowledge and experience.

Constructs as personally or socially constructed

The study was based on acceptance of the dialectic between constructs as personally constructed and constructs as socially determined. It was suggested in chapter 5 that where representations of the world are shared, that is to say, individuals present broadly similar or overlapping construct systems, that this could reflect a number of potential influences, for example, shared clinical experience, professional ideology or a broader socio/political influence.

Detailed exploration of the similarities and differences between the groups demonstrated considerable sharing of construct systems and representations relating to patients and their care. However, the grids of the experienced groups were more highly correlated with each other than were those between the experienced and non experienced groups. The high overall correlations suggest the social nature of the representations depicted within the grids, but the lower correlations which existed between the experienced and the non experienced groups suggest that nurse training has had a moderating effect on construing. In spite of the high correlation between the experienced groups, the use of unrotated principal components analysis identified ways in which the curriculum studied appeared to have had yet a further influence, or mediating effect, on the nurses' construing (see Tables 7.13, 8.8, 8.15).

The subtle differences between the groups, which relate to their experience and the curriculum studied, support the argument that to speak of social representations in an all-encompassing way is likely to have the effect of limiting our understanding of the influences upon construing and shared representations. It is clear from the study that construing is an act that is socially influenced, and also that there are different layers or dimensions to the term 'social'. The work on corporate aspects of construing by Balnaves and Caputi (1993), referred to in chapter 5, goes some way towards helping

us understand the complexity of these layers but considerably more work is required in this area.

Ideological dimensions of construing

It was suggested in chapter 5 that once one considers an individual's thinking and learning processes within a social context it becomes impossible to ignore the impact of culture and ideology upon these processes. A distinction was made between lived and intellectual ideology (Billig et.al. 1988), with lived ideology reflecting the social aspects of everyday thinking including beliefs, values, and cultural practices, and intellectual ideology reflecting a formalized philosophy of the world. It was suggested that non-formalized consciousness or lived ideology could be studied and become formalized/intellectualized, and also that aspects of intellectual ideology could permeate everyday living and become part of culture.

This two way process complicates the picture in relation to understanding shared representations. The construing of the comparison groups demonstrates this well since central features of their construing relating to both patients and their care were shared with the experienced groups, in spite of them not having experienced any formal nurse training, thereby suggesting the influence of aspects of lived and intellectualized ideology that has been generated from a number of sources. For example,

aspects of a caring professional ideology of nursing in which all patients are deserving of care will have permeated into a broader social/cultural ideology. It is likely that those who opted to train as nurses would have been amongst those who felt most comfortable and accepting of this 'image' of the nurse, and would therefore have arrived in training already sharing this aspect of construing with the more experienced nurses. It could also reflect a selection 'bias' in favour of candidates holding particular attitudes relating to patients and their care. These aspects of professional ideology may not, however, sit comfortably with aspects of social ideology derived from other sources, for example an ideology which blames those who have 'caused their ill health by their behaviour'.

Health researchers have been very adept at demonstrating the link between behaviour and health which in itself could theoretically at least remain a neutral relationship. However, as this study of student nurses demonstrates, this has become powerfully associated with a judgement relating to personal responsibility for ill health. A further study focussing on socio-political influences on this aspect of ideology could provide more information on the specific nature of the factors influencing this feature of the students' construing.

What is clear from this research study is that both aspects of ideology, that is to say, that reflected in

'the caring professional' who considers all patients to be deserving of care, and that reflected in the 'judge' who considers that where the person has a behaviourally linked illness that they should be held responsible for their ill health, are present in the construing of all groups of student nurses studied. However, there is some indication that the new curriculum students were slightly less judgemental than the other groups and it was suggested that their programme might have enabled them to be aware of a range of factors which could have a bearing on a person's behaviour and in turn therefore their health status (see Table 8.8).

Further studies are required to see whether these differences are maintained beyond the initial three year training period. It would also be useful to study the impact of Project 2000 on this aspect of student nurses' construing.

To conclude this section on ideology, an analogy will be drawn between health education programmes designed to promote behaviours consistent with good health, and professional education programmes. The former are notorious for their ineffectiveness in changing health beliefs and behaviours. Attention was drawn in chapter 3 to the distinction between ordinary beliefs and value beliefs. Ideology from a variety of sources will be implicitly embedded within value beliefs. Both health education programmes and professional education

programmes aim to influence attitudes and behaviour. However, the ideas introduced by such programmes, in themselves often powerfully ideologically influenced, have to find a place alongside other belief systems. The impact of these programmes is therefore very likely to be significantly moderated by influences external to the programmes.

The study outlined in the previous chapters was designed to explore the impact of curriculum change on the construing of student nurses. The results chapters show in detail the areas of similarity and difference between the student groups and suggest where it seems reasonable to attribute difference to the change in curriculum. An in depth sociological study would be required to provide further understanding of the ideological dimensions of the students' construing.

Dilemmatic aspects of ideology

The discussion above lends support to the notion (Billig et.al.1988) of ideology containing dilemmatic features and of these being reflected within shared construct systems. This reinforces the view of Potter and Wetherill (1987) that inconsistency may not represent a temporary error but be an everyday feature of thought. This leads to a discussion of the results within the context of ideas introduced in the earlier chapters relating to the themes of inconsistency, incongruity, and learning.

Inconsistency, incongruity and learning

It was suggested in chapter five that incongruities may occur between lived and intellectual ideologies and also within each, and that recognition of the dilemmas associated with these incongruities presents the individual with the opportunity for deliberation and thoughtful behaviour. However, it was also suggested that we live in a world in which unreflective following of routines and deliberative thought and action may co-exist. This co-existence introduces the potential for individuals to 'harmoniously' hold incongruent and inconsistent constructs. They could then *present* as 'competent negotiators of reality' (Potter and Wetherill 1987). The likelihood is, however, that aspects of 'reality' are frequently not reflected upon and recognized as incongruent, thereby reducing the amount of competent negotiating required.

Jarvis (1992) suggested that learning begins with a fundamental disjuncture between individual biography and socially constructed experience, and that this disjuncture leads people to ask questions, thereby setting the learning process in motion. However, if disjuncture is accepted as a 'normal' feature of life it may frequently fail to prompt learning.

In relation to the results presented in chapters 7 and 8, one feature of the students' construing is worth discussing in relation to the above debate. Regardless of curriculum studied the experienced groups all considered themselves least well prepared in relation to those nursing activities which could broadly be defined as psychosocial, and also felt least well prepared in relation to nursing those patients for whom psychosocial care was considered of primary importance. In spite of this they also reported valuing highly psychosocial aspects of nursing and considered it an important part of nursing care.

On the face of it, if Jarvis' views are accepted, then it would be expected that learning should be triggered by the disjuncture between belief and experience. However, all groups also held what might appear to be a contradictory view that they were well qualified to carry out all of the nursing activities, including psychosocial activities, and to nurse all patients, including those with a primary psychosocial need. It was suggested earlier that this view was likely to reflect a professional set of constructs to do with nurses being competent and prepared to cope with any situation with which they are faced. Such constructs might aid coping in difficult situations but could well have the effect of minimizing the experience of disjuncture, thereby inhibiting potential learning.

The theme of inconsistency also emerged within the work of Argyris and Schon (1974) and Argyris (1993) in which they explored the nature of actionable knowledge, drawing a distinction between espoused theories and theories-in-use. Argyris (1993) differentiated between applicable knowledge and actionable knowledge, suggesting that in order to actualize relevant knowledge, specific and relevant behaviours must be identified and produced. The results presented in chapters 7 and 8 indicate that the students espoused theories reflected a valuing of psychosocial nursing activities and an intent to practice them. There was also indication that their 'theories in use' were not totally congruent with the espoused theories. For example, time limitations detrimentally affected psychosocial activities more than others, and they also felt least well prepared in these areas. If Argyris' views are accepted, this suggests that the nurses' training programme was effective in introducing the students to 'applicable' psychosocial knowledge, but was less effective in introducing them to specific and relevant behaviours designed to turn this into 'actionable' knowledge.

In summary, features of the curriculum are likely to have contributed to the development of incongruence between espoused theories and theories in use. However, the co-existence of constructs to do with being sufficiently well prepared for practice, together with an element of unreflective following of routines, would be likely to

have minimized the disjuncture referred to by Jarvis as the trigger for learning. The indications are, therefore, that the impact of professional education is considerably limited by influences which extend beyond the details of the actual curriculum studied.

If the above points are accepted, this reinforces the view outlined in chapter 2, that the process of nursing is only partially influenced by the nursing models and associated procedural guide-lines taught within the context of the professional education programme and that the nurses' values, attitudes and beliefs play a significantly influential role in determining practice.

The results also reinforce the view that cognitive complexity will have only a partial bearing on interpersonal communication and other aspects of professional practice. Equally important is the specific nature of construing in terms of the discriminations made between elements. This discrimination will be influenced by the nature of the elements, the capacity of the construer for complex thinking, and also reflect implicit value judgements.

The results also support the position taken in chapter 3 that helpers, including nurses, are unlikely to consistently use any one model of helping. The model of helping used is likely to be influenced by the ways in which the helper construes the patient. This research

gives clear indication that patients are construed in very different ways, with constructs to do with the cause of ill health being salient discriminators.

The most notable feature of the results, however, is the finding that in spite of the new curriculum representing a major curriculum change, it had an almost negligible impact on the construing of those student nurses who followed it. The considerably increased number of hours devoted to teaching psychosocial nursing were not reflected in terms of the students' construing of this aspect of their role. Students felt least well prepared in relation to psychosocial nursing, regardless of the curriculum studied, and the value judgements made by the nurses were overwhelmingly similar regardless of curriculum studied.

The final part of this chapter is devoted to discussing the research methods used in this study.

9.4, Discussion of research methods used in this study

The research methods used in this study were based upon Kelly's (1955) personal construct theory and repertory grid techniques. However, these were extended to allow for the identification of shared aspects of construing.

The first part of the study on the student nurses' construing of nursing activities, relied on the

elicitation of elements and constructs within a group situation. Details of this and other aspects of the research method are outlined in chapter 6. This aspect of the research required considerable piloting and development work prior to its use within the context of this study.

It was not the intention of the study to identify student nurses' construing and then to compare this with some arbitrarily defined 'correct or appropriate' measure. This being the case, producing precise guide-lines for future practice based upon the results would be inappropriate since these assume the acceptance of shared values and goals. The study was intentionally exploratory both in terms of identifying the ways in which student nurses construed patients and their care, and also in terms of exploring the relationship of the emergent construct systems to the theoretical perspectives introduced in chapters 1 to 5. The study was, however, carefully designed to enable the impact of curriculum change on student nurses' construing to be measured. The introduction of the new curriculum in the college of nursing created the opportunity to study a naturally occuring 'experiment'.

An interesting area of debate relates to the switch from the discursive exploratory approach used within the earlier parts of the research, to what could be construed as a more technical approach in the latter parts of the

study. This mirrors the use in this study of both qualitative and quantitative approaches to data gathering and analysis.

The particular approach was devised since it was considered it would be sufficiently flexible to allow for an exploratory inductive study of student nurses' construing, but that it would also be sufficiently rigourous to effectively cope with large amounts of data in such a way that similarities and differences between the groups could both be identified and considered as meaningful within the context of this research. It can only be speculated as to whether a study that had remained purely qualitative in terms of its data gathering approach and analysis would have reached similar conclusions to this one.

A potential further area of debate relates to whether demand characteristics (Orne, 1962) might have had a subtle influence on the recorded construing of all students, thereby distorting the data and giving a false appearance of similarity. Orne suggested that subjects search for cues that might tell them what the experimenter's hypothesis is and regard these cues as 'demands' or 'demand characteristics' requiring a particular response.

For a number of reasons demand characteristics are unlikely to have played a significant role in influencing

the results of this research. Firstly, the research was exploratory rather than experimental in the conventional sense. That is to say, no clear hypothesis was tested but broad questions of interest were investigated using both qualitative and quantitative research approaches.

Secondly, the reasons for carrying out the research were explained to students and it was made quite clear that there were no right or wrong 'answers' either in terms of construct and element elicitation, or the ratings of these. Students were told that similarities and differences between the groups were of interest but they could not have tailored their responses to be similar to other groups since they did not know the details of other groups' grids or the ratings of these.

The 'complexity' and incongruence of aspects of the construing emerging within the group grids also suggests that students were not simply trying to please the researcher but that they were influenced by a range of often competing internal and external pressures. It is therefore likely that social, professional, and ideological factors were more influential than demand characteristics in determining the results of the study.

The integration of different approaches to analysing the data

Chapters 7 and 8 demonstrate the use of a number of methods for analyzing the repertory grid data gathered during this study. Each of these approaches allowed for the identification of different facets of the students' construing. It was the integration of these various facets which proved most challenging and yet potentially most valuable in terms of recognizing the complexities of student nurses' construing. This facilitated the debate relating to the relationship between professional education, ideology and learning.

The use of both GAB and HICLAS analyses of data also made it possible to extend the debate relating to cognitive complexity and interpersonal communication, introduced in chapter 4. This is taken up in the section below.

Cognitive complexity and interpersonal communication

Reference was made in chapter 4 to a number of assessment measures developed to operationalize the construct of cognitive complexity. A number of these measures have been used in research designed to establish a relationship between cognitive complexity and interpersonal communication. There is implicit acceptance within these studies that complexity can be measured with the primary focus being upon the use of constructs, rather than the nature of the elements, within any construct element relationship.

It was suggested in chapter 4 that because an individual is judged by Bieri's (1966) or Crockett's (1965) measures to be construing in a 'cognitively simple' way in a particular situation, that it should not be assumed that under different circumstances they could not demonstrate complexity. It was also suggested that account needs to be taken of the interaction between potential complexity and attitudinal factors which may interfere with the realization of this.

The use of GAB and HICLAS analyses of data within this research study has indicated the potential for using two alternative but complementary ways of conceptualizing cognitive complexity. Calculation of the contribution to variance of component I constructs, derived from the GAB analysis, made it possible to identify those constructs

most used to discriminate amongst the elements and the degree of 'redundancy' of other constructs. Where the contribution to variance of component I constructs is particularly high, for example 65% or above, this can be construed as indicating a cognitively simple construct system.

This measure was used in relation to both grid 1 and grid 2 data. In spite of a degree of variation within each group of grids, some of which it was suggested could be accounted for by length of experience, grid 1 was generally construed in a more 'simple' way than grid 2. However, HICLAS analysis provides an interesting alternative dimension to the manifestation of complexity.

By providing a hierarchical classes analysis of both elements and constructs and their interrelationships it becomes possible to consider 'complexity' in terms of both element and construct characteristics and the interrelationship of these.

In this research no formal operational definition of complexity was given in relation to the HICLAS analysis of grids. However, in view of the limitations of measures currently available this is an area worthy of further investigation. For example, where shared elements and constructs are used within a grid it would be possible, using HICLAS, to compare individual or group construct

systems in terms of the 'goodness of fit', that is to say, the number of discrepancies, at different ranks of analysis. It would also be useful to integrate this with information on the number of empty construct and element bundles. Work of this kind would allow for complexity to be understood more fully within the context of the actual nature of the elements construed, the construct element interrelationships, and the hierarchical structure of these. Exploring cognitive complexity in this way could prove very fruitful in terms of increasing our understanding of professional practice and decision making.

Summary

In this chapter the results of the study were summarised and discussed in relation to the constructivist perspective, construing as a personal and social act, the ideological dimensions of construing, inconsistency, incongruity and learning. The research methods were discussed and suggestions for further research were made.

The following chapter concludes the study by drawing attention to a number of broader issues arising from the research.

CHAPTER 10

Conclusion

This study concludes by drawing attention to a number of issues. The first of these relates to the *generalizability* of the results. The study was carried out with student nurses in one college of nursing but involved large numbers of students from different training programmes and continued throughout the total training period for four of these groups. A research methodology was developed specifically for this study and a range of methods of data analysis were used. These were designed to facilitate exploration of a range of theoretical issues relevant not only to nurse education, but to learning within the broader context of professional education. Themes which consistently emerged can, therefore, be reliably considered as relevant both to nurse education and to professional education in general.

The shifting emphasis from training to professional education

Attention was drawn in chapter 2 to the gradual shift away from nurse preparation as an 'apprenticeship' type training towards one granting student status to the learner. In recent years the emphasis has moved from the provision of a professional 'training' largely received

in the clinical environment, to provision of professional education, with an increased emphasis on school based learning.

The new curriculum students in this study were afforded a longer period of 'student status' than previous groups prior to starting their clinical placement experience. For students studying the more recent project 2000 curriculum this period of time is still further extended. This reflects a major shift in emphasis away from training to a more broadly based educational preparation for student nurses. The results of this study highlight the importance of researching the impact of Project 2000 on the knowledge skills and attitudes of student nurses. It is vital to identify whether the curriculum change associated with Project 2000 is having any greater impact on students than the curriculum change reported in this study appears to have had.

It must not be assumed, however, that because there was very little difference between the groups in terms of their construing at completion of training, that greater differences would not have emerged following the experience and increased confidence associated with being a qualified nurse. Further research is required to identify the influence of experience on the construing and nursing practices of qualified nurses, and the relationship between these and the training curriculum followed.

It is important to consider the implications of shifting too far in the direction of education at the expense of training if we wish to avoid a situation in which students end up with considerable 'applicable knowledge', as described by Argyris (1993), at the expense of 'actionable knowledge'. Careful monitoring of the impact of project 2000 is vital if this is to be avoided.

Generic versus specialized roles for trained nurses

An important issue to consider within the context of this research is what the role of the general nurse 'should' be. Training clearly relates in some way to desired outcome but it is important to give explicit consideration to what is considered desirable. For example, implicit within the new training structures is acceptance of a psychosocial role for general trained nurses. However, what is desirable in terms of the extent of this role has considerable implications for the degree of expertise which should be attained.

Considerations of this kind cannot be separated from debate about the organization and structure of nursing. In the 1970's in conjunction with the introduction of the 'nursing process' as a formalized approach to care, there was a move away from 'task allocation' to nurses engaging in 'total patient care'.

This approach requires nurses to be competent to engage in activities utilizing a wide range of knowledge and skills. As the depth and breadth of these skills increases this raises a number of questions about the appropriateness of the 'total patient care' model of nursing. For example, is it realistic for all general nurses to be responsible for providing 'psychological care' for those patients in their care, or should a few nurses more highly trained in this aspect of work, provide specialist psychological care across a range of settings.

If the above approach were to become adopted, self selected general nurses would undergo further training. They would then provide psychological care to a larger number of patients than would be possible if they were combining this aspect of their role with conventional 'total patient care.'

It is not the intention here to develop a totally new structure for the practice of nursing, but to highlight the importance of considering educational change and outcomes within the context of the organizational structures within which professional practice occurs. Sometimes these structures may be inappropriate to present needs.

The results of the present study indicate that significantly increasing the psychosocial components of

the curriculum for all student nurses made very little overall difference to their construing of patients and their care. However, whether within groups of student nurses some students are more receptive than others, is a question for further research focussing on individual differences rather than groups as a whole. Further research may demonstrate that a better use of resources would be to put more energy into teaching a smaller carefully selected number of nurses the knowledge and skills necessary to become effective specialist 'psychosocial' nurses, rather than to expect all nurses to be 'generic experts'.

Conclusion

This study was prompted by curriculum change and the desire to explore implicit assumptions relating to its impact. This has inevitably led to a consideration of broader issues relating to professional education/training, and its relationship with organizational aspects of professional practice.

Change is a feature of life and 'solutions' are, therefore, at best only partial and temporary. The implication of this is that implicit assumptions relating to change and change outcomes should continue to be questioned. '... the more objectively supported the theory at the time of its inception, the more likely it is to cause trouble after it has served its purpose'

(Kelly, 1969a, p.67). If the contructivist perspective adopted throughout this study is accepted then alternative ways of viewing the world will always exist.

> Nature can be regarded as open to an infinite variety of alternative constructions - some of them better than others ... and with most of the best ones yet to be concocted. In such a system the function of an answer is not to make further questioning unnecessary but to hold things together until a round of better questions has been thought up(Kelly, 1969b, p.116).

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APPENDIX 1

Nursing Activity Grid 1i

Elements

1. Maintaining personal hygiene and comfort.
2. Giving medication.
3. Carrying out physical observations, eg.temperature, pulse, respiration and blood pressure.
4. Admitting a patient.
5. Dealing with death.
6. Fetching and carrying.
7. Engaging in health education of patients.
8. Teaching colleagues.
9. Psychological care.
10. Diversional activities.
11. Carrying out technical procedures, eg, removing sutures.
12. Learning through observing specific activities and procedures.

Constructs

1. I did this frequently/I did not do this frequently.
2. Communication skills are an important part of this/Communication skills are not an important part of this.
3. I very much enjoyed this/I did not enjoy this.
4. I found this simple to do/I found this difficult to do.
5. Trained staff did this frequently/Trained staff did not do this frequently.
6. This was severely limited by time constraints/This was not severely limited by time constraints.
7. I found this activity stressful/I did not find this activity stressful.
8. I felt well prepared for this/I did not feel well prepared for this.
9. This was a patient centred activity/This was not a patient centred activity.
10. This required a lot of thought and imagination/This did not require a lot of thought and imagination.
11. This was a learned activity using taught skills/This was not a learned activity using taught skills.
12. This was an optional activity/This was not an optional activity.
13. This activity was highly valued by me/This activity was not highly valued by me.
14. This activity was highly valued by trained staff/This activity was not highly valued by trained staff.

APPENDIX 2

Nursing Activity Grid, 1ii

Elements

1. Maintaining personal hygiene and comfort.
2. Giving medication.
3. Carrying out physical observations, eg.temperature, pulse, respiration and blood pressure.
4. Admitting a patient.
5. Assessing a patient.
6. Laying a patient out.
7. Non-nursing duties, eg.fetching and carrying.
8. Teaching a patient.
9. Carrying out technical procedures eg. removing sutures, dressings.
10. Handover report.
11. Maintaining a safe environment.
12. Talking to patients.
13. Helping patients cope with stress.

Constructs

1. I did this frequently/I did not do this frequently
2. Communication skills are an important part of this/Communication skills are not an important part of this.
3. I very much enjoyed this/I did not enjoy this.
4. I found this simple to do/I found this difficult to do.
5. Trained staff did this frequently/Trained staff did not do this frequently.
6. I found this activity stressful/I did not find this activity stressful.
7. I felt well prepared for this/I did not feel well prepared for this.
8. Perceived by patients as important/Not perceived by patients as important.
9. When I did this I was adequately supervised by the trained staff/When I did this I was not adequately supervised by the trained staff.
10. This was usually a self motivated activity/This was not usually a self motivated activity.
11. This was an optional activity/This was not an optional activity.
12. I felt able to cope with this/I did not feel able to cope with this.
13. This activity was highly valued by me/This activity was not highly valued by me.
14. This activity was highly valued by trained staff/This activity was not highly valued by trained staff.

APPENDIX 3

Nursing Activity Grid 1iii

Elements

1. Maintaining personal hygiene and comfort.
2. Giving medication.
3. Carrying out physical observations, eg.temperature, pulse, respiration and blood pressure.
4. Admitting a patient.
5. Laying a patient out.
6. Non-nursing duties, eg.fetching and carrying.
7. Education of patients.
8. Carrying out technical procedures, eg.removing sutures, dressings.
9. Administration, eg.kardex and paperwork.
10. Maintaining a safe environment.
11. Listening to patients.
12. Reassuring and comforting patients.

Constructs

1. I did this frequently/I did not do this frequently.
2. Communication is an important part of this/Communication is not an important part of this.
3. I very much enjoyed this/I did not enjoy this.
4. Requires specialist knowledge/Does not require specialist knowledge.
5. Actively involves the patient/Does not actively involve the patient.
6. Involves set procedures/Does not involve set procedures.
7. Entails risk of damaging the patient/Does not entail risk of damaging the patient.
8. I found this simple to do/I found this difficult to do.
9. I found this stressful/I did not find this stressful.
10. I found this satisfying/I did not find this satisfying.
11. This is significant to a patient's recovery/This is not significant to a patient's recovery.
12. Highly valued by me/Not highly valued by me.
13. Highly valued by trained staff/Not highly valued by trained staff.
14. Trained staff did this frequently/Trained staff did not do this frequently.

APPENDIX 4

Nursing Activity Grid, 1iv

Elements

1. Carrying out observations.
2. Learning about patients emotional condition.
3. Accompanying on drug rounds.
4. Talking to patients and relatives.
5. Listening to patients and relatives.
6. Getting to know machinery and equipment.
7. Colostomy care, catheter care and bowel care.
8. Pressure sore prevention.
9. Lifting patients.
10. Assisting patients with personal hygiene.
11. Assisting with rehabilitation.
12. Preparing patients for surgery - physically and 'talking'.
13. Wound care.
14. Keeping the patient comfortable.
15. Talking to relatives.
16. Listening to relatives.

Constructs

1. A fairly standard activity/Needs adapting for each patient.
2. Necessary for prevention of further health problems/Not necessary for prevention of further health problems.
3. Important the patient is actively involved in this activity/Not important the patient is actively involved in this activity.
4. Important the patient cooperates with the activity/Not important whether the patient cooperates.
5. A highly skilled activity/Not a highly skilled activity.
6. Important to do this regularly/Not important to do this regularly.
7. A routine activity/Not a routine activity.
8. This needs teaching early and properly/This does not need teaching early and properly.
9. Doing this badly could affect own health/Doing this badly is not likely to affect own health.
10. Likely to be done as part of a multi-disciplinary team/Not likely to be done as part of a multi -disciplinary team.
11. I am likely to be well prepared for this in the classroom/I am not likely to be well prepared for this in the classroom.
12. I anticipate enjoying this/I do not anticipate enjoying this.
13. I anticipate being nervous about doing this wrong/I do not anticipate being nervous about doing this wrong.

Grid 1iv contd.

14. I anticipate having to overcome my own embarrassment/I do not anticipate having to overcome my own embarrassment.

15. Likely to be influenced by time limitations/Not likely to be influenced by time limitations.
16. Likely to be able to carry out as taught in the classroom/Not likely to be able to carry out as taught in the classroom.

APPENDIX 5

Nursing Activity Grid, 1v

Elements

1. Assisting patients with personal hygiene.
2. Carrying out observations, eg.temperature, pulse, respiration and blood pressure.
3. Assisting on drug rounds.
4. Helping patients with their worries.
5. Reassuring patients.
6. Listening to patients and relatives.
7. Domestic activities.
8. Observing and learning from qualified staff.
9. Aseptic procedures.
10. Elementary technical care.
11. Working with care plans.
12. Hand-over reports.
13. Admitting and orienting new patients.

Constructs

1. Likely to be an important aid to recovery/Not likely to be an important aid to recovery.
2. Requires specialized skills/Does not require specialized skills.
3. Utilizes taught skills/Does not utilize taught skills.
4. Requires the use of initiative/Does not require the use of initiative.
5. Likely this has to be done in a specific way/Not likely this has to be done in a specific way.
6. Requires empathy with the patient/Does not require empathy with the patient.
7. Is likely to need doing frequently/Is not likely to need doing frequently.
8. Textbook learning important for this/Textbook learning is not important for this.
9. Learning by experience is important for this/Learning by experience is not important for this.
10. Likely to require direct patient contact/Not likely to require direct patient contact.
11. Communication skills essential to this/Communication skills not essential to this.
12. Likely to be a well documented activity/Not likely to be a well documented activity.
13. Trained staff are likely to do this frequently/Trained staff are not likely to do this frequently.
14. I anticipate enjoying this/I do not anticipate enjoying this.
15. Likely to be influenced by time limitations/Not likely to influenced by time limitations.

APPENDIX 6

Nursing Activity Grid 1Bi

Elements

1. Helping patients to maintain personal hygiene and comfort.
2. Carrying out specialized and technical procedures, eg. dressings and drip management.
3. Giving medication.
4. Admitting and orientating new patients.
5. Carrying out physical observations, eg. temperature, pulse, respiration and blood pressure.
6. Learning about patient's emotional condition.
7. Teaching patients self care.
8. Health promotion activities.
9. Providing psychological care.
10. Assisting with rehabilitation of the patient.
11. Administration.

Constructs

1. I enjoy doing this/I do not enjoy doing this.
2. Mainly done by students/Mainly done by trained staff.
3. Communication is an important part of this activity/Communication is not an important part of this activity.
4. This is frequently limited by time constraints/This is not frequently limited by time constraints.
5. I find this stressful/I do not find this stressful.
6. I feel well qualified to do this/I do not feel well qualified to do this.
7. Highly valued by me/Not highly valued by me.
8. Generally highly valued by trained staff/Not generally highly valued by trained staff.
9. Generally highly valued by patients/Not generally highly valued by patients.
10. Actively involves the patient/Does not actively involve the patient.
11. Important for patient's recovery/Not important for patient's recovery.
12. Usually self motivated/Not usually self motivated.
13. An optional activity/Not an optional activity.
14. Well documented in the nursing notes/Not well documented in the nursing notes.

APPENDIX 7

Nursing Activity Grid, 1Bii

Elements

1. Helping patients to maintain personal hygiene and comfort.
2. Carrying out specialized and technical procedures, eg. dressings and drip management.
3. Giving medication.
4. Admitting and orientating new patients.
5. Carrying out physical observations, eg. temperature, pulse, respiration and blood pressure.
6. Learning about patient's emotional condition.
7. Teaching patients self care.
8. Health promotion activities.
9. Providing psychological care.
10. Assisting with rehabilitation of the patient.
11. Administration.

Constructs

1. I anticipate I will enjoy doing this/I anticipate I will not enjoy doing this.
2. I expect this will be mainly done by students/I expect this will be mainly done by trained staff.
3. Communication is likely to be an important part of this activity/Communication is not likely to be an important part of this activity.
4. This is likely to be frequently limited by time constraints/This is not likely to be frequently limited by time constraints.
5. I anticipate I will find this stressful/I do not anticipate finding this stressful.
6. I anticipate my training will prepare me well for this/I do not anticipate my training will prepare me well for this.
7. Likely to be highly valued by me/Not likely to be highly valued by me.
8. Likely to be highly valued by trained staff/Not likely to be highly valued by trained staff.
9. Likely to be highly valued by patients/Not likely to be highly valued by patients.
10. Likely to actively involve the patient/Not likely to actively involve the patient.
11. Likely to be important for patient's recovery/Not likely to be important for patient's recovery.
12. I anticipate this will usually be self motivated/I anticipate this will not usually be self motivated.
13. This is likely to be an optional activity/This is not likely to be an optional activity.
14. Likely to be well documented in the nursing notes/Not likely to be well documented in the nursing notes.

APPENDIX 8

Patient Grid, 2

Elements

1. A 30 year old person suffering from panic attacks associated with travelling.
2. A 45 year old person who seven days ago suffered a severe heart attack.
3. A 70 year old person who is recovering from pneumonia.
4. A 62 year old person suffering from depression.
5. A 30 year old person suffering from AIDS.
6. A 55 year old person who has recently been diagnosed as having lung cancer.
7. A 45 year old person suffering from liver failure and alcoholism.
8. An 80 year old person who took an overdose of sleeping pills.
9. An 18 year old person weighing only five and one half stones and suffering from anorexia nervosa.
10. A 15 year old person who is suffering from an acute asthmatic attack.
11. A 20 year old person who recently attempted suicide by taking a drug overdose.
12. A 40 year old person who has recently learned they are suffering from multiple sclerosis.

Constructs

1.* This person is very likely to be responsible for their disorder/This person is not very likely to be responsible for their disorder.
2. Is very likely that this person could have avoided their disorder/Is not very likely that this person could have avoided their disorder.
3. This person's problem is very likely to be preventable/This person's problem is not very likely to be preventable.
4. This person should be encouraged to take responsibility for their health/This person should not be encouraged to take responsibility for their health.
5. This person should be encouraged to become involved in their own care and treatment/This person should not be encouraged to become involved in their own care and treatment.
6. Is very likely that this person could make sensible decisions about their own care and treatment/Is not very likely that this person could make sensible decisions about their own care and treatment.
7. Is very likely a lot can be done to help this person/Is not very likely a lot can be done to help this person.
8. Is very likely nurses can do a lot to help this person/Is not very likely nurses can do a lot to help this person.

Grid 2 contd.

9. Is very likely this person could do a lot to help themselves/Is not very likely this person could do a lot to help themselves.
10. Stress is very likely to have played a part in the cause of this/Stress is not very likely to have played a part in the cause of this.
11. This person is very likely to be suffering from stress/This person is not very likely to be suffering from stress.
12. *I could be like this/I could never be like this.
13. *I would enjoy nursing this person/I would not enjoy nursing this person.
14. My perceptions of this person and their care are very likely to be shared with the majority of trained staff/My perceptions of this person and their care are not very likely to be shared with the majority of trained staff.
15. *Is very likely a good person/Is very likely a bad person
16. This person should receive education concerning their condition and its treatment/This person should not receive education concerning their condition and its treatment.
17. Medical treatment is likely to be very important for this person's well being/Medical treatment is not likely to be very important for this person's well being.
18. The health of this person is likely to improve/The health of this person is not likely to improve.
19. *This person is likely to be very ill/This person is not likely to be very ill.
20. This person's behaviour is very likely to have contributed to their illness/this person's behaviour is not very likely to have contributed to their illness.
21. *This person deserves a lot of help/This person does not deserve a lot of help.

* denotes based on construct used by Wilkinson (1982)

APPENDIX 9

Patient Grid, 2Bi

Elements

1. Panic attacks.
2. Coronary heart disease.
3. Depression.
4. AIDS.
5. Lung cancer.
6. Liver failure and alcoholism.
7. Anorexia Nervosa.
8. Asthma.

Constructs

1. I enjoy nursing people with this/I do not enjoy nursing people with this.
2. Communication is an important part of this nursing care/Communication is not an important part of this nursing care.
3. I find nursing people with this condition stressful/I do not find nursing people with this condition stressful.
4. My training has prepared me well for this nursing care/My training has not prepared me well for this nursing care.
5. Nurses can do a lot to help people with this/Nurses can not do a lot to help people with this.
6. I could suffer from this/I could not suffer from this.
7. These patients need educating about their condition and its treatment/These patients do not need educating about their condition and its treatment.
8. Social factors likely to have had a role to play in the development of this/Social factors not likely to have had a role to play in the development of this.
9. Behavioural factors likely to have had a role to play in the development of this/Behavioural factors not likely to have had a role to play in the development of this.

APPENDIX 10

Patient Grid, 2Bii

Elements

1. Panic attacks.
2. Coronary heart disease.
3. Depression.
4. AIDS.
5. Lung cancer.
6. Liver failure and alcoholism.
7. Anorexia Nervosa.
8. Asthma.

Constructs

1. I anticipate enjoying nursing people with this/I do not anticipate enjoying nursing people with this.
2. Communication is likely to be an important part of this nursing care/Communication is not likely to be an important part of this nursing care.
3. I anticipate finding nursing people with this condition stressful/I anticipate I will not find nursing people with this condition stressful.
4. I anticipate my training will prepare me well for this nursing care/I anticipate my training will not prepare me well for this nursing care.
5. It is likely nurses can do a lot to help people with this/It is likely nurses can not do a lot to help people with this.
6. I could suffer from this/I could not suffer from this.
7. These patients need educating about their condition and its treatment/These patients do not need educating about their condition and its treatment.
8. Social factors likely to have had a role to play in the development of this/Social factors not likely to have had a role to play in the development of this.
9. Behavioural factors likely to have had a role to play in the development of this/Behavioural factors not likely to have had a role to play in the development of this.