

**ATTITUDE FORMATION AND CHANGE TOWARD PEOPLE WITH
DISABILITIES**

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ABSTRACT

This study investigates attitude formation and change toward people with disabilities in a sample of Australian undergraduate nursing (N=90) and teaching students (N=90). As part of their university training both student groups undertake a mandatory disability course component and, as professionals, are influential in the delivery of quality services to people with disabilities.

Stage I of the study included three phases of data collection, corresponding to the three years of students' university study. This stage examined major variables predicted to account for changes in students' attitudes, outcomes of the mandatory disability unit on students, effects of different forms of contact with people with disabilities on resultant attitudes and outcomes of the mandatory disability unit on students' future career and post-graduate study choices.

Stage II of the study was an experimental intervention, incorporating three experimental groups and one control, testing the most effective methodology for predicting attitude change toward people with disabilities. Pre-and post-test data is collected, analysed and reported.

Confirmation was provided of hypotheses predicting positive attitude change in teaching students across the three years of their university training. This demonstrates the success of mandatory special education units in leading to positive attitudes. Nursing students reported raised levels of discomfort in social interaction and more negative attitudes after completion of the mandatory unit, challenging the assumption that mandatory study leads to positive

attitude change. Implications for future curriculum development and implementation, policy development and service delivery are discussed.

Hypotheses related to the effects of contact with people with disabilities on attitude formation and change were confirmed. Personal contacts (i.e. with family, friends) led to more positive attitudes and less discomfort in social interaction. Students whose majority contact was on practicum were more negative, reported lower levels of self-efficacy and higher levels of discomfort in social interaction. Relationships were also reported between students having more negative attitudes, higher levels of discomfort in social interaction and lower self-efficacy, with disinterest in undertaking post-graduate study or working in the disability field. The ramifications of these findings for policy and curriculum development are discussed, particularly in regard to the preparation and support of students across the practicum experience.

In the experimental study all treatment groups became more positive toward people with disabilities both after the intervention and compared with the control, with the most effective interventions incorporating self-efficacy training and contact with an equal-status peer. These results reinforce the importance of equal-status contact and have major implications for the organisation of clinical placements in nursing courses. The need to both acknowledge and support students' fears regarding interactions with people with disabilities, and to facilitate valued social role contact, is discussed.

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CHAPTER 1: THE RESEARCH PROBLEM

Background to the research problem

The community integration of people with disabilities has been one of the most visible and widely debated outcomes of the international human rights and social justice movements. However, the practice of community inclusion has not been embraced by all members of society, challenging the suggestion that an increased visibility of people with disabilities will automatically lead to community acceptance (Warren, 1985; Rees, Spreen & Harnadek, 1991). In fact, stereotyped beliefs and negative images of people with disabilities continue to be reinforced and perpetuated through media portrayals, service practices and individual behaviours (Wright, 1983, 1988; Rees, Spreen & Harnadek, 1991). This has led to the assertion that a society's attitudes, beliefs and resultant prejudices remain the major overwhelming obstacle to the acceptance of people with disabilities as valued community members and has a strong potential to jeopardise the nature and delivery of quality services (Pederson & Carlson, 1981; Fenderson, 1984; Goodyear, 1983; Miller, 1984; Geskie & Salasek, 1988; O'Brien, 1990; Antonak & Livneh, 1988; Stern, 1993).

Across the last two decades, a growing awareness of existing inequality of life opportunities for people with disabilities has led to formal and informal attempts to redress past practice. In Australia, recent social, legislative and policy changes have ensured that community integration and equal opportunity become not only current philosophy, but also enforced practice. However, while legislation can enforce changes to models of service provision and ensure equality of opportunity for people with disabilities, positive

attitudes cannot be similarly ensured (Jones & Guskin, 1984; Rioux, 1994). The philosophy of equality and acceptance is not always reflected in practice, with current debate implying that the human rights of people with disabilities are not well respected in Australia (Burdekin, 1991a), and that general community attitudes remain negative or non-accepting (Wright, 1983; Fenderson, 1984; Gething, 1984b; Geskie & Salasek, 1988; Gething, 1994b).

Recent legislation in countries such as Australia and the USA, enforcing specific standards of service provision, places an examination of existing attitudes toward people with disabilities firmly onto the research agenda. An urgent call to address the relationship between negative attitudes toward people with disabilities, and access to life opportunities, is evident in current literature (e.g. Kilbury, Benshoff & Rubin, 1992; Gething, 1994a). Research examining attitude change toward people with disabilities is critical, as it will challenge previous complacency, lead to a greater understanding of variables influential in negative attitude formation and propose possible strategies for change (Rees, Spreen & Harnadek, 1991).

A growing awareness of the nexus between successful community integration and positive attitudes toward people with disabilities has resulted in a proliferation of programs of attitude change. Ensuing critiques of these activities suggest that informal, unstructured programs, such as increased contact and information or media campaigns are less successful in enhancing positive attitudes than those incorporating personal contact with people with disabilities (Yuker, 1977; Donaldson, 1980; Gething, 1984b; Gething, 1991b). These findings form a strong rationale for the development and implementation of formalised programs of attitude change.

A major outcome of the community integration of people with disabilities and legislative enforcement of specific standards of service provision, has been the growing professionalisation of people working in the disability field. One response to this has been the development of specific programs of education and training for service providers. Courses in habilitation, rehabilitation, special education, vocational training and community support have proliferated within the TAFE and University sectors across Australia. A recent development has been the inclusion of specific units of disability-related study into professionally oriented undergraduate university courses. In NSW, both undergraduate teacher education and nurse education courses contain mandatory units in special education and developmental disability respectively. Related research is of current significance due the NSW Department of School Education edict that all graduate teachers must complete a mandatory unit in special education to be eligible for employment (Boston, 1994).

While the efficacy of including mandatory disability units within undergraduate university courses is not questioned, their effect upon students' attitudes toward people with disabilities has yet to be examined. The inclusion of mandatory disability study into professionally oriented university courses is an acknowledgment of the major influence that specific professional groups have on the lives of people with disabilities. Historically, professionals have been afforded a high status as gatekeepers of knowledge and information, directly influencing quality service practices (Altman, 1981; Oliver, 1990). The overt and covert power of professionals is identified throughout the literature. Health professionals, in particular, are posited to hold more negative attitudes than the general population although empirical

validation of this assertion is lacking (Chubon, 1982, 1992; Roush, 1986; Gething, 1991a). There is consensus that an examination of this proposition is critical, as negative attitudes of professionals such as nurses have the potential to jeopardise the rehabilitation and health status of people with disabilities (Lindgren & Oermann, 1993; Roush, 1986; Chubon, 1982).

Attitudes of teachers toward the integration of students with disabilities has also been examined in educational research (e.g. Center & Ward, 1987; Chow, 1991). Related findings suggest that attitudes of teachers toward people with disabilities cannot be assumed to be positive. Studies report that teachers' attitudes are directly associated with the success of programs of school integration, peer acceptance of students with disabilities and influence learning and future life opportunities of students with disabilities (Gottlieb, 1980; Altman, 1981; Hannah & Pliner, 1983; Jones & Guskin, 1984; Gottlieb, Corman & Curci, 1984; Leyser, Cumblad & Strickman; 1986).

It is acknowledged that both teachers and nurses have greater contact with people with disabilities in their everyday work relative to other professional groups. As professionals, nurses and teachers assume a high status position which can inform and influence the wider community.

The personal experience of the writer, along with anecdotal and research evidence (Hannah & Pliner, 1983; Leyser, Cumblad & Strickman, 1986; Roden, 1989; Brillhart, Jay & Wyers, 1990) give strength to the rationale for a longitudinal study of attitude change toward people with disabilities in undergraduate teaching and nursing students. Nursing students, in particular, express hostility and fear

regarding their interactions with people with disabilities, even after specialist training and organised contact (Brillhart, Jay & Wyers, 1990). Teaching students express fears regarding the required competence to teach students with disabilities and are negative about the practice of integration, mirroring attitudes of many practising teachers and the general community (Hannah & Pliner, 1983; Chow, 1991).

An attempt to foster positive attitudes with undergraduate students, in preparation for professional practice, should be of major concern to educators. However, there is little evidence of research examining the effect of mandatory educational experiences on students' attitudes. Any assumption that positive attitudes toward people with disabilities automatically result from mandatory study, needs empirical validation. An awareness of this lack of research led directly to the development of this study.

The research problem

As previously noted, the inclusion of mandatory studies in disability within Australian university undergraduate nursing and teaching courses has led to informal debate regarding their efficacy but little formal discourse or research investigating outcomes. After graduation, these students are qualified to provide direct services to people with disabilities as health professionals and educators. As professionals' attitudes are likely to strongly influence their practice and consequent provision of quality services to people with disabilities, further research is necessary to investigate the variables influencing attitude change and the outcome of mandatory disability study on attitude formation. The research problem has taken these issues into account as follows:

What changes occur in pre-service nursing and teaching students' attitudes toward people with disabilities during students' three year University course, in particular after completion of the mandatory disability unit?

From this general research problem five major sub questions are generated:

- i. What are the major variables accounting for changes in students' attitudes?
- ii. What is the outcome of the mandatory study in disability on students' attitudes?
- iii. What are the effects of different forms, frequency and context of contact with people with disabilities on resultant attitudes?
- iv. What are the outcomes of the mandatory disability study on students' interest in working with people with disabilities and post graduate study choices?
- v. What are effective methodologies for predicting attitude change toward people with disabilities?

Introduction to the study

This study is divided into two stages with four phases of data collection. Stage I is a longitudinal investigation of changes in students' attitudes toward people with disabilities during their three year teaching and nursing courses. The sample is made up of two distinct groups of students, those undertaking a Diploma of Applied Science (Nursing) which prepares them for registration as a nurse in NSW (N=90), and those undertaking a Diploma of Education in preparation for a career in teaching (N=90). Three phases of data collection are included in the first stage of the study, corresponding with the students' three years of study.

STAGE I

Data collection phase I aims to collect descriptive data relating to the subjects, data related to prior contact with people with disabilities and baseline data on the attitude measures implemented throughout the study (The Attitude Toward Disabled Persons Scale, ATDP and the Interaction With Disabled Persons Scale, IDP) prior to the mandatory disability unit.

Data collection phase II aims to collect both quantitative and qualitative data related to the outcome of the mandatory unit in disability on students' general attitude toward people with disabilities, level of discomfort in social interaction and self-efficacy beliefs regarding future interactions with people with disabilities. Data on students' assessment of the contact component of the mandatory unit is also collected.

Data collection phase III collects data on the longevity of general attitude change, discomfort in social interaction, self-efficacy beliefs regarding future interactions with people with disabilities and assessment of any further contact. Data regarding career choice and postgraduate study will also be collected.

An analyses of both qualitative and quantitative data will from data collection phases I-II will be undertaken. Results will have implications for the development and implementation of the experimental study, Stage II.

STAGE II

Data collection phase IV. The second stage of the study takes the form of an experimental intervention testing a variety of models of attitudinal change, with the sub-population of students who report the most negative attitudes.

Rationale of the study

The study of attitude change toward people with disabilities across students' three years of University training is worthy of investigation. If variables influencing attitudinal change can be isolated, consequent negative attitudes may be addressed. In this way the perpetuation of non-accepting attitudes in professionals may be avoided and general community attitudes may be influenced by the portrayal of positive professional role models. Furthermore, recent legislative change (e.g. the Commonwealth Disability Discrimination Act, 1992 and the NSW Disability Services Act, 1993) require professionals to embrace a model of disability service provision which presupposes specific attitudes and values.

The rationale for isolating nursing and teaching students lies in the inclusion of mandatory disability units within their respective undergraduate courses. Information about outcomes of mandatory disability study on student attitude are likely to be useful for government policy makers and people involved in the development of educational policy and related curricula. Such a study would challenge any assumption that positive attitude change toward people with disabilities is an automatic outcome of mandatory disability study. A variety of issues are examined and discussed including: the appropriateness of specific models of curricula, the type and quality of contact with people with disabilities, resultant changes in students' attitudes, and subsequent interest in extending knowledge or working in the disability field after graduation.

General significance of the study

The study promises to make a significant contribution to a range of contexts. In particular, a major contribution will be made to the context of education and training of undergraduate nursing and teaching students, examined in depth in Chapter 2. Findings will assist those involved in curriculum development and in the organisation and structure of practicum placements of nursing and teaching students. Findings will also be relevant to the wider professional context of teaching and nursing.

Furthermore, the study is highly pertinent to research in the disability field in its investigation of the influence of students' contact with people with disabilities and resultant attitude change. The 'contact' variable is repeatedly cited in the literature as necessitating further examination (Evans, 1976; Donaldson, 1980; Amsel & Fichten,

1988; Biordi & Oermann, 1993; Lindgren & Oermann, 1993) yet few studies have investigated the specific nature of contact within a longitudinal study. The development of a tool to measure the influence of the mandatory contact component of nursing and teaching courses will be useful in subsequent research.

The study will also contribute to the discipline of social psychology as it isolates the construct of self-efficacy as a cognitive dimension mediating attitude change. The development and implementation of a tool to measure level of self-efficacy regarding students' future professional interactions with people with disabilities is of significance. An investigation of the previously untapped construct of self-efficacy toward future interactions with people with disabilities, may lead to further empirical study.

Lastly, the longitudinal nature of the study is of significance as the majority of previous investigations into attitude change toward people with disabilities have taken place across a short time span.

In conclusion, the study will be of significance if the findings assist in providing theoretical models and practical applications which lead to the development of positive attitudes and quality service delivery.

Definition of disability

Definition of the term disability within this study is taken from the World Health Organization (1980) classification of impairment, handicap and disability as follows;

Impairment: an anatomical or functional abnormality which may or may not result in a disability;

Disability: a loss or reduction of functional ability which results from an impairment; and

Handicap: a disability or impairment which significantly interferes with the individual's ability to lead a normal life

World Health Organization (WHO, 1980, p 11)

In this definition, an impairment is a medical condition, a disability is a functional consequence of this and a handicap a social consequence. The term 'people with disabilities' is used throughout this study.

Current terminology in Australia is reflected in the Disability Services Act (1986) which specifies the target group of disability services as people with a permanent disability arising from an intellectual, psychiatric, sensory or physical impairment (or combination), where the disability results in substantially reduced capacity for communication, learning or mobility and where there is an ongoing need for support services.

CHAPTER 2: CONTEXT OF THE STUDY

Introduction

The context of this study is multi-faceted. It fits within a changing historic, social, and legislative context, resulting from the growing human rights movement, concomitant awareness of issues of social justice and equality and the subsequent community integration of people with disabilities.

Secondly, it fits within an educational context required to be responsive to the social and legislative change through acknowledgment of the community inclusion of people with disabilities. The development and implementation of mandatory special education and disability units in undergraduate nursing and teaching courses is one response to these changes, as are current policies and practices related to integration.

Thirdly, it lies within the context of disability research which is undergoing continual questioning and refocussing due to transitions in philosophy and resultant practice. Disability related research acknowledges the importance of positive attitude formation and its influence upon service provision with current debate calling for a move from the paradigm which conceptualises 'disability' as a 'disease or condition' to one which gives due recognition to societal and environmental influences (Rioux, 1991, 1994; Ward & Flynn, 1994).

Each of these contexts is examined in this chapter.

Historical, social and political context

Throughout history, people with disabilities have been devalued by society. They have been socially invisible, powerless and without status. In Western society the return of people with disabilities to social visibility has only taken place across the last two decades.

Negative attitudes toward people with disabilities can be traced back through British and European history. Historical accounts by writers such as Pritchard (1963), and Kanner (1964) provide comprehensive documentation of factors leading to inhumane treatment and resultant marginalisation.

By the turn of the 20th century social Darwinism, biological determinism and the eugenics movement began to dominate current ideology. Intelligence was quantified and measured by IQ tests and there was a pervasive belief that many social problems including ill-health, crime, poverty and intellectual and physical disability, were the direct result of genetic inferiority. A central theme of biological determinism is that worth can be assigned to individuals and groups on the basis of their heredity, and that the nature of their heredity is reflected in the nature of their intelligence. It was argued that social worth and the provision of services for people with disabilities were a reflection of biological order. It is suggested that unjust practices including the inadequate provision of services and lack of equal rights legislation have been justified by such an ideology (Rioux, 1991).

The biological conception of 'disability' influenced discourse up until the last two decades, resulting in the continuing differential

treatment of people with disabilities. These beliefs impacted upon the lives of people with disabilities, resulting in laws which:

- i. removed the rights of people with disabilities as citizens, such as stripping them of the right to own property,
- ii. legalised the collection and retention of many people with disabilities in custodial institutions,
- iii. obliged individuals to live the whole of their life with people of the same gender,
- iv. defined people with disabilities as incapable of learning
- v. prevented people with disabilities from marrying, and
- vi. made it possible for sterilisation to take place without consent

(Tully, 1986)

It is clear that the ramifications of social Darwinism, biological determinism and the eugenics movement had a powerful influence on attitudes inherent in society, resultant provision of services and ultimate quality of life of people with disabilities. The medical domination of the disability arena has continued to influence research and resultant practice for many years. Critiques of resultant discriminatory practices are a consistent theme found in contemporary literature (Tully, 1986; Rioux, 1991, 1992; Stockholder, 1994; Zola, 1994).

Australian context

The historic treatment of people with disabilities in Australia mirrors other parts of the world. However, idiosyncratic features particular to the development of the Australian economic and social system are evident. It is suggested that there is a strong relationship between the economic and social characteristics of a society and their treatment of people viewed as 'different' or 'deviant' (Goffman, 1968; Ford, 1981; Tully, 1986; Stern, 1993). Societies which experience significant social and economic change may modify their conceptions of 'difference' or 'deviance' although the beliefs of the dominant group remain influential. This inherent social control influences general community attitudes and quality of service provision to marginalised groups. In an Australian context, there is a clear link between society's treatment of people with disabilities and the treatment of other devalued groups such as those with psychiatric disabilities, indigenous Australians and the aged (Bostock, 1991).

In Australia, the last decade has been a period of social and legislative reform in regard to human rights of marginalised groups generally and people with disabilities in particular. This development began after the International Year of Disabled People (IYDP) in 1981, when issues related to access, equity and resultant quality of life for people with disabilities were publicly debated. Since IYDP, people with disabilities and their advocates have more actively voiced their views regarding issues of empowerment, self-determination and equality leading to the development of legislation regarding service provision, discrimination and related equity issues.

This era of awareness of the rights of people with disabilities is not solely an Australian phenomenon but has emerged across all Western societies as a consequence of the social justice and human rights movements and concomitant equal opportunity and anti-discrimination legislation. An acknowledgment of the shift from the invisibility and segregation of people with disabilities, to the community inclusion and right to self-determination, encompasses one of the major contexts of this study.

Australian disability legislation

In Australia, social change and active lobbying has led to the formulation of the Disability Services Act (DSA, 1986) which encapsulates a number of rights, principles and objectives within Federal legislation. This reform resulted from the Handicapped Programs Review which was commissioned in 1983 and resulted in a report entitled 'New Directions' which included a comprehensive review of the range of services available for people with disabilities.

The spirit and intent of the Disability Services Act (1986) is to give people with disabilities similar rights in terms of lifestyle, work and leisure as any other person in the community. Its vision is

"to develop a fair society where all Australians can share equitably in the distribution of resources, (in particular employment opportunities); have equal civil, legal and industrial rights; where there is a fair and equal access to essential services such as housing, health and education; and where all have the opportunity to participate in community life and decisions which affect the community" (Burdekin, 1991b).

The Disability Services Act (1986) is regarded as a major step towards achieving social justice for all people with disabilities by assisting them to achieve full potential and enjoy rights and choices in everyday life

including worthwhile employment opportunities (Burdekin, 1991b). This Act gave services specific guidelines to be met as a prerequisite to ongoing funding. Community access and quality of life for people with disabilities are central to these guidelines. For some services these provisions required a radical change to both their mode of operation and their underlying philosophy.

Another major breakthrough in equal opportunity provision for people with disabilities in Australia was the introduction of the Disability Reform Package (DRP) in 1991. This initiative aimed to assist people with disabilities gain increased independence in the community through improved access to rehabilitation, training and job search assistance.

Leading from the Commonwealth Disability Services Act (1986) recognition of the need for a rationalisation of responsibilities, resources and accountability from the Commonwealth to the States for all services to people with disabilities (except those involving the vocational/employment area) led to the signing of a Commonwealth/State Disability Agreement (1991). This agreement provided the framework for states to target needs specific to service provision at a more localised level and to prevent costly duplication of services. Consequent to this agreement, NSW passed its own Disability Services Act (1993) which complements the Commonwealth DSA (1986). All Australian states have undertaken similar legislative initiatives. The NSW DSA (1993) aims to embody the changing context of disability service provision and provide a watershed reform for people with disabilities, their families and carers. Its implementation will be closely monitored by consumers of services and their representative peak organisations.

A further example of the acknowledgment of issues of social justice by governments is the passing of the Federal Disability Discrimination Act (DDA) on March 1st, 1993. This Act states that discrimination based on disability is unlawful and that individuals who are discriminated against because of their disability have right of complaint to the Human Rights and Equal Opportunity Commission.

While such legislation is to be applauded and while changes in service practice can be legislated, changes in attitudes of service providers cannot. Underlying the changes to service provision enforced by both the Commonwealth Disability Services Act (1986), the Commonwealth-State Agreement (1991), the NSW Disability Services Act (1993) and the Disability Discrimination Act (1993) are concomitant shifts in attitude. For a true acceptance and implementation of the spirit and intent of this legislation a strong philosophical commitment to the rights of people with disabilities is necessary. In support of this assertion, the Australian Federal Human Rights Commissioner, Brian Burdekin, suggests that legislative change alone is not enough:

"a lot of the worst problems are not necessarily problems that require legal change. They are problems that require decent administrative practices, more sensitivity, more enlightened views; there is a lot more involved than just changing the law. It is clear that legal change is very often a necessary precondition for changing and educating public attitudes to the point where people with intellectual disabilities and other disabilities have exactly the same rights and indeed additional rights to special protection where that is required" (Burdekin, 1991b)

Thus, a major shift is necessary in societies' perception of people with disabilities as inactive recipients of services to that of consumers of services with equals rights to all members of society.

In an Australian context the present study is timely in that it examines attitude change toward people with disabilities within the context of contemporary social and legislative change. The specific contexts of the two groups of subjects under examination, nurses and teachers are also important and are discussed in the following sections.

Nurse education context

The philosophy of normalisation (Wolfensberger, 1972) which led to the practice of de institutionalisation, has had a significant impact upon the disability nursing profession. As both the medical and nursing professions were involved in the development of institutions for people with disabilities from their inception, a medical model of custodial care was common practice until the last two decades. The role of nurses in institutions was clearly defined. They provided nursing care firmly entrenched within a medical model which incorporated routines and practices similar to those undertaken in general hospitals. In line with this philosophy, specialist nursing training in the disability area was also based on a medical model. In NSW specialist certificates in 'Mental Retardation Nursing' were developed. This qualification was included as a separate register along with other specialities such as midwifery or psychiatric nursing.

The movement of nurse education from the hospital based system to the tertiary sector (1985) brought a concomitant change to the underlying philosophy of educational practice and the system of registration. In 1987 the previous system of multiple registration was amalgamated into one register incorporating mental health (psychiatric), developmental disability (mental retardation) and medical/surgical (general) nursing. The inclusion of developmental

disability and mental health nursing as a pre-requisite for beginning practitioners differed to the previous system which had isolated these areas as specialities. This required undergraduate nursing courses to incorporate substantial theoretical and practical components to satisfy both curriculum boards and the NSW Nurses Registration Board (NRB). This movement towards a comprehensive model of practice is seen as altering the face of nursing, requiring a reconceptualisation of previous beliefs (Atkins, 1990).

The broadened knowledge, skills and attitudes required of new nursing graduates is challenging to the profession as a whole and brings with it continuing debate relating to the efficacy of the disability component of the curriculum. Many universities take an integrated or holistic approach wherein the area of developmental disability is not distinct from other specialities (Roberts, 1991). Some, however, maintain the separate nature of this area and offer specific units in developmental disability incorporating a broad range of models of disability within their curricula. Curriculum models range from those with a strong medical orientation to those which have a behavioural, social or educational base. This haphazard approach is contrary to current practice in undergraduate teacher education courses wherein special education units usually take a developmental/educational approach within the context of inclusive education. There is little reported evidence of the efficacy of specific approaches although one study found that a model based on the social construction of disability is more likely to be implemented when academic staff have a behavioural or social science background (Brillhart, Jay & Wyers, 1990). Anecdotal reports suggest that curricula which takes an educational/developmental perspective, with a focus on the

implementation of learning programs are becoming more common in NSW (Ang, H. 1992). However, curricula with a strong medical orientation based on a curative, genetic approach, although less common, still exist. The continuation of informal debate regarding the efficacy of specific types of approaches to curriculum development in this area adds to the significance of the present study.

The changing nature of the role of nurses in service provision to people with disabilities adds to the significance of this study. In NSW the Richmond Report (1983) recommended the devolution of large institutions into the community. The transition from a medically oriented model which implied 'sickness' to community based accommodation implying 'normalcy' challenged traditional conceptions of custodial care. Many nurses, however, were affronted by the Richmond Reports' implications that they were no longer appropriate caregivers for people whose primary needs were in education and accommodation support, and argued that nurses had a variety of skills which were suited to a range of environments (Atkins, 1990; Milson, 1990).

The challenge for nurses to maintain and justify their continued work with people with disabilities led to political activity. In N.S.W. a professional association entitled Professional Association of Nurses in Developmental Disability Areas (NSW) (PANDDA) was formed in 1988 in response to this debate. Its agenda is to provide a forum for nurses who work in the field of developmental disability and to lobby for the recognition and maintenance of the nurse's role in this area. It argues that all nurses require specific competencies in this area as people with disabilities have high levels of associated chronic

conditions (Beange, 1987) and come into contact with nurses in a wide range of settings, not just traditional disability areas (Dalley, 1989).

The limited available literature asserts there is still a viable role for nurses within the changing disability field with the suggestion that the nurse's role in caring for people with disabilities is unique in that nurses have specific skills in the areas of assessment, health promotion, and consultation (Roberts, 1991). Registered nurses are widely spread in positions throughout the hierarchy of service provision systems (Atkins, 1990) and the NSW Department of Community Services advertises for registered nurses when recruiting new staff in supported accommodation services. In the USA, where deinstitutionalisation has been common practice for longer than in Australia, the medical model of disability is not common practice, yet nurses are included as important members of the multi-disciplinary team, assisting the process of habilitation for people with disabilities (Steadham, 1993). In Australia, as the devolution of institutions continues, nurses maintain an important role in these facilities and have a viable part to play in the process of transition.

However, the context of the nurse's role with people with disabilities is broader than that of disability service provision alone. Within the general hospital system, nurses need adequate educational preparation to effectively care for the ever growing number of people with disabilities and chronic illness who access generic services (Lindgren & Oermann, 1993). This increases the need for education and fostering of positive attitudes for all nurses. An important outcome of the present study lies in the way by which its findings can inform the development of nurse education curricula within the context of the community inclusion of people with disabilities.

Teacher education context

The philosophy of integration of students with disabilities into the mainstream of education has been accepted contemporary practice in Australian systems of education since the mid seventies. Research highlights the importance of teacher attitude as an influential variable in the successful integration of students with disabilities (Good & Brophy, 1972; Hannah & Pliner, 1983; Westwood, 1984; Leyser & Lessen, 1988; Center & Ward, 1987, 1989; Thousand & Burchard, 1990; Wheldall, 1991). The necessity for undergraduate teachers to complete mandatory special education units has been widely debated in educational forums since integration became a common practice (Martin, 1991). However, due to time constraints and variable commitments, many Australian universities offer courses in special education at post graduate level only, or as a pre-service elective (Hickson, 1989). In these instances, teacher education students can graduate with little knowledge of ways to best support students with disabilities.

Over the last decade special education interest groups in NSW have continued to lobby for the inclusion of special education at an undergraduate level. This issue was finally addressed in NSW, when the NSW Minister for Education, Dr Terry Metherell, wrote to all heads of tertiary institutions seeking support and assistance on issues related to the quality and relevance of pre-service teacher education. The first area addressed was that of special education.

The Minister stated:

"Teachers in New South Wales Government Schools are responsible for teaching students with varying levels of ability. Many students will experience learning difficulties at some stage of their education and some will have

specific disabilities which will significantly affect their learning. The Government believes the initial training of all teachers should make them aware of the range of disabilities that they may encounter in students and the support services available to them.

Recent reports on teacher education and training have argued the need for compulsory units in special education. The prior board of Higher Education supported the need for these units and they are now offered in a number of institutions but on an optional basis.

The need for all teachers to have at least basic skills in this area is so great that I support the argument that there should be a mandatory special education unit in all pre-service teacher training courses " (Metherell, 1988).

It was recommended that newly trained teachers appointed from 1991 onwards complete at least one course in special education, requiring a minimum of two hours contact time per week across one semester. Further to this initiative, the Director General of School Education in NSW, Ken Boston, wrote to Vice Chancellors of NSW Universities stating that a pre-requisite to employment for new graduates from January 1994 would be completion of a special education unit equivalent to a thirteen week course. This information was to be clearly documented on the transcript of completed courses.

While it is not disputed that such an initiative is both timely and necessary, there has been little discourse in the literature related to the development of mandatory units, the efficacy of including specific methodologies and the outcome on student knowledge, skills, attitudes and subsequent practice. Limited discussion of issues related to the lack of uniformity of course structure, the difficulties faced by a non-integrated curriculum and the 'mystique' surrounding the area of special education and the underlying mythologies is found in both local and international literature (Stone & Brown, 1987; Hickson, 1989).

The paucity of information available in this area, highlights the need for research examining the development, structure and outcome of mandatory disability study.

However, an acknowledgment present throughout the literature is the relationship between teacher attitude and the success of programs of integration. Studies of integration practices suggest that the classroom climate is crucial to the success of integration, with positive teacher attitude the major variable (Hannah & Pliner, 1983; Center & Ward, 1987; Chow, 1991). When teachers and university lecturers were asked to rank the most crucial content and competency to be included in courses on integration, teachers' attitudes were isolated as critical (Goodspeed & Celotta, 1982). In the area of pre-service teacher education, preliminary empirical evidence suggests that implementation of pre-service special education units enhances knowledge of students with disabilities and learning difficulties, general attitudes to people with disabilities and acceptance of integration (Hoover & Cessna, 1984; Westwood, 1984).

Further empirical investigation of the outcome of mandatory disability study on the development of positive attitudes and professional skills at an undergraduate level is critical within a changing educational context. Results and recommendations of studies investigating attitude change will inform the development of curricula, policy and practice.

Disability research context

The social change which led to the de-institutionalisation of people with disabilities has had a direct effect upon research initiatives in this field. Studies of both community and educational integration have

proliferated, with findings consistently isolating positive community attitudes toward people with disabilities as a significant precursor to the success of community integration (Fenderson, 1984; Center & Ward, 1987, 1989; Stern, 1993).

It is asserted that across the last two decades theoretical models of disability have shifted from the traditional medical model, focusing on individual impairments, conditions and medical interventions to a socio-political model which acknowledges societal influences (Ward & Flynn, 1994). Although there is widespread recognition that service provision practices are in transition as a response to legislative and social change, this is not always acknowledged or reflected within the disability research context. In fact, the literature suggests that much disability related research fails to reflect the shift from a medically focused paradigm of theorising about 'disability' toward a view of disability as a social construction (Oliver, 1990; Rioux, 1991, 1994). A major limitation of disability related research is the inability of researchers to extend their conception of 'disability' further than a clinical/medical approach which focuses on defects, deformities and disease (Meyerson, 1988; Seidmann, 1988; Wright, 1988; Ward & Flynn, 1994). Within this conception the origins and treatment of the disability overwhelm the lives of people with disabilities, with extrinsic factors such as societal, environmental and attitudinal influences ignored. It is strongly asserted that resultant data is unlikely to represent the real experiences of people with disabilities or support any movement away from the medical model of theorising (Meyerson, 1988; Rioux, 1994).

It follows that future research must challenge the previous conception of people with disabilities as passive recipients of services

(Oliver, 1990). A shift away from this model of research is evident in contemporary writing which acknowledges the role societal and attitudinal factors play in influencing the quality of life of people with disabilities (e.g. Zola, 1994; Rioux & Bach, 1994).

This chapter embeds the study within the contemporary context of historic, social and legislative change as well the changing nature of related research paradigms. The next chapter leads on to a more specific examination of theoretical models which underpin research on attitudes toward people with disabilities.

CHAPTER 3:THEORETICAL CONCEPTUALISATIONS OF ATTITUDE: Structure, Definition, Conceptual Models and Theoretical Explanations

Attitude structure

Introduction

Research into attitudes toward people with disabilities is prolific. Critiques of this research suggest that a clear explanation and discussion of the structure, definition and theoretical underpinnings of the attitude construct are often lacking (e.g. Chubon, 1992). This chapter examines literature related to the structure, definition and theoretical explanations of attitude formation and change toward people with disabilities. It then looks at specific variables identified in related literature as influential in attitude formation of nurses and teachers. From an analysis of this literature conceptual models of attitude formation and change, used as the theoretical underpinning of the present study, are formulated and discussed.

As early as 1918, social psychology was defined as the scientific study of attitudes (Thomas & Zaniecki, 1918). Although the study of attitudes has existed since this time, contemporary theorists find it difficult to agree on precisely what an attitude is and how it can be identified (McGuire, 1986, 1989). The elusive nature of attitude definition and structure is evident throughout the literature. Discourse relating to the structure of attitudes is intense and continues to be prominent in attitude research (Pratkanis, Breckler & Greenwald, 1989; Olson & Zanna, 1993).

Discussion and debate surrounding attitude structure has largely focused on the uni-dimensional versus multi-dimensional nature of

attitudes. The unitary view (or one dimensional model) commonly regards attitudes as affective orientations toward objects (e.g. Fishbein & Ajzen, 1975), whereas the more popular multi-dimensional view takes two forms :

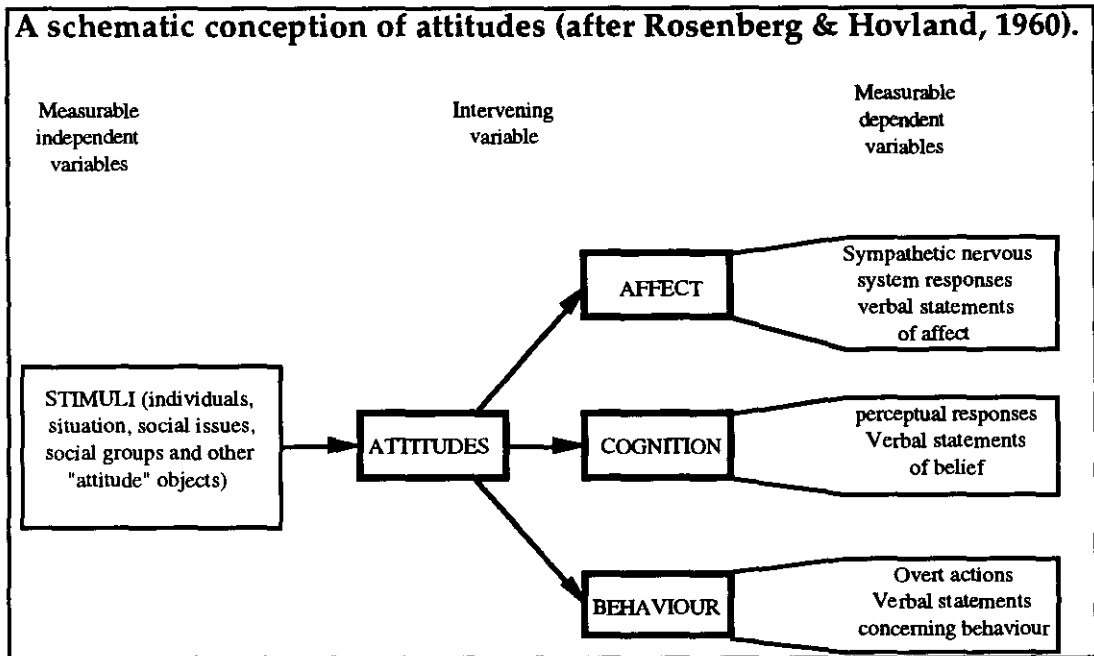
- i. the tripartite model, which views attitudes as having the three dimensions of affect, cognition and behaviour, and
- ii. the two-dimensional model which includes affect and cognition but not the behavioural component.

Argument surrounding these three conceptions of attitude structure have strongly influenced research and related literature. However, this debate is not evident in studies on attitudinal change toward people with disabilities where theoretical assumptions and conceptual underpinnings are often ignored (Shaver, Curtis, Jesunathadas & Strong, 1989; Chubon, 1992). A review of the major models of attitude structure identified in the literature and an analysis of current debate regarding attitude structure and definition provides a rationale for the conceptual model proposed in this study.

The tripartite model

The tripartite view as popularised by Rosenberg & Hovland (1960) assumes that attitudes have an affective, cognitive and behavioural component with each one varying on an evaluative dimension (Figure 3.1). Thus, attitudes consist of how we feel, what we think, and what we are inclined to do about an attitude object. These three components play co-extensive and/or substitutive roles in determining behaviour (Canary & Seibold, 1984).

Figure 3.1 The tripartite model



From Triandis, H (1971) *Attitude & Attitude Change* N.Y: John Wiley & Sons p. 3.

Early theorists accepted this tripartite model and by 1960 it began to play a central role in major treatments of both attitude theory and attitude change (Breckler, 1984; McGuire, 1969, 1985, 1986).

There is a widespread interest in the tripartite construct of attitudes among disability researchers concerned with deleterious reactions to people with disabilities by the general public and significant others (Chubon, 1992). It follows that many studies investigating attitude change toward people with disabilities incorporate the tripartite conceptualisation of attitude as their theoretical base. In a review of this area of research, Shaver, Curtis, Jesunathadas & Strong (1987, 1989) found that 208 studies out of 705 defined attitude from this perspective (Table 3.1). Research critiques suggest that definitions of attitude based on the assumption of a cognitive-affect-behaviour linkage are best suited to the pursuits of studies of attitude toward people with disabilities (Chubon, 1992).

Table 3.1: Definitions of 'Attitude' in Research Reports of attitude change toward people with disabilities.

Type of Definition	Effect Sizes		Reports	
	N	%	N	%
None	317	45	114	53
Affective	65	9	22	10
Cognitive	9	1	4	2
Behavioural	5	1	3	1
Affective & Cognitive	88	12	21	10
Affective & Behavioural	13	2	3	1
Affective, Cog.& Beh'l	208	29	48	22
Total	705	99	215	99

From Shaver, Curtis, Jesunathadas & Strong (1987) The Methodology and Outcomes of Research on Modifying Attitudes Toward Persons With Disabilities: A Comprehensive, Systematic Review, Paper presented at the annual meeting of the American Educational Research Association, Washington DC, April 24, 1987 p.25.

This table shows that the debate surrounding attitude structure and definition has had limited influence in research on attitudes toward people with disabilities with the vast majority of studies failing to incorporate any theoretical base (317 effect sizes).

The unitary model

This conception of attitude can be traced back to early attitude theorists such as Thurstone (Thurstone & Chave, 1929). It suggests that attitudes consist of evaluative or affective responses to attitude objects. This model, also named the expectancy or instrumental approach, was popularised by Fishbein & Ajzen (1974a, 1974b, 1975) whose work dominates the attitude structure debate. Their reconceptualisation proposes that affective responses are based upon cognition and that an

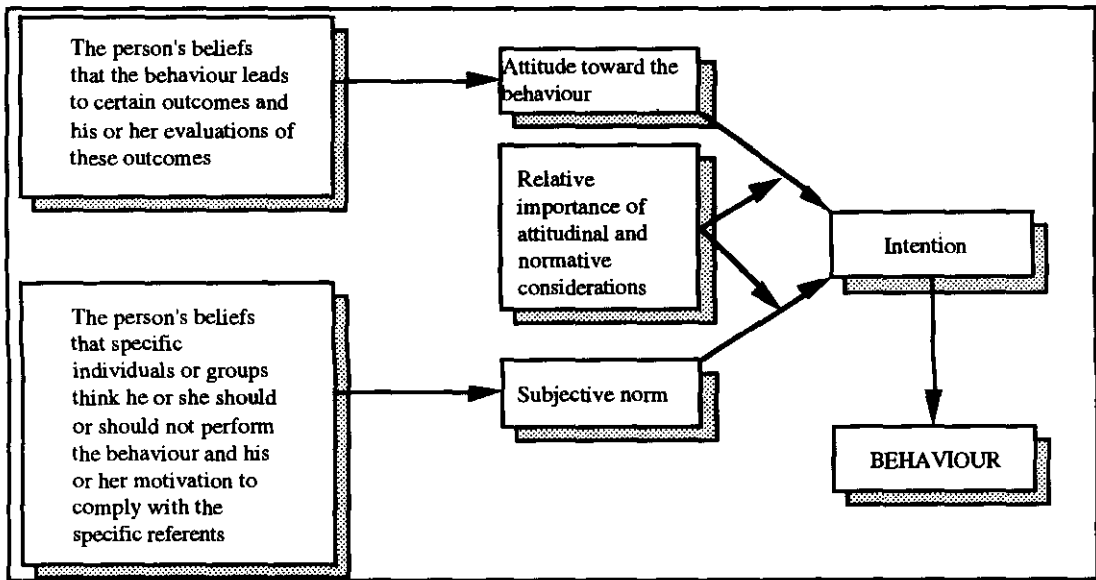
attitude is composed of beliefs regarding possible rewards and costs (outcomes) that result from acting toward the attitude object in particular ways. The work of Fishbein (1967), Ajzen & Fishbein, (1980) and Triandis (1971, 1980) continue to be of greatest influence to this unitary view of attitude structure.

The one component view of attitudes is not strongly evident in research into attitudes toward people with disabilities. A critique of research on attitude change toward people with disabilities reported that only 65 out of 705 effect sizes used this conceptualisation as a theoretical base (see Table 3.1). This appears incongruent as the majority of research into attitudes toward people with disabilities uses measurement tools which assess one component of attitude alone, most commonly the cognitive component (Hannah & Pliner, 1983).

The most influential unitary model of attitude structure is the theory of reasoned action (Fishbein & Ajzen, 1980). In this unidimensional model, attitude is defined as a person's position on a dimension of affect or evaluation (Figure 3.2).

Within this model, attitudes towards a specific behaviour combine with subjective norms to influence a person's intentions. These intentions, in turn, guide but do not completely determine behaviour. This model places the link between attitudes and behaviour within a broader context than previously identified, as the cognitive element is viewed as a precursor to attitudes, rather than a separate component.

Figure 3. 2 The Theory of Reasoned Action



A theory of the cognitive chain to behaviour. The arrows indicate the direction of influence. From Ajzen & Fishbein (1980) *Understanding Attitudes and Predicting Social Behaviours* Englewood Cliffs, New Jersey: Prentice Hall

The two-dimensional model

This model developed partially from the belief that inclusion of the behavioural component, (as in the tripartite model) blurs the attitude-behaviour relation, and from criticism of the simplicity of the unitary model as conceptualised in the work of Fishbein & Ajzen (1974a, 1974b, 1980).

The most influential two dimensional model cited in the literature resulted from a re-conceptualisation of the theory of reasoned action. This new model, renamed the theory of planned behaviour (Ajzen 1985), extended the unitary model to include variables whose behavioural impact may not be mediated through intentions. Revision was thought necessary to incorporate the concept of 'volitional control' (i.e. situational or internal obstacles to performing the behaviour) (Ajzen, 1985; Ajzen & Madden, 1986). This theory conceptualises perceived control as a construct underlying an

individual's perception of obstacles which prevent behaviour from occurring.

Studies using this theoretical base have shown that such perceived control has both direct and indirect (via behavioural intentions) effect upon behaviour (Schifter & Ajzen, 1985). A body of research has developed which suggests that similar factors may account for the effects of situational and personal constraints on behaviour (e.g. Chaiken & Stangor, 1987).

In a review of attitude change research toward people with disabilities only 13 studies were found to use a two dimensional model as their definitional base (Shaver, Curtis, Jesunathadas & Strong, 1987) (see Table 3.1). However, as this conceptualisation is relatively new, further studies may incorporate this model of attitude.

Critiques of models of attitude structure

Criticisms of the unitary model of attitude structure have been directed toward its over-simplification. In particular, the model proposed by Fishbein & Ajzen (1980), see Figure 3.2, has been criticised for neglecting to emphasise the role of affective experience or past behaviours (Zanna & Rempel, 1988). Support for the relevance of affective experience as an important determinant of evaluation and/or behaviour is prevalent in the literature (Zajonc, 1980; Abelson, 1982). So, too is the proposition that attitudes are often inferred from past behaviours (Bem, 1972; Salancik, 1974). A review of research of teachers' attitudes toward integration of students with disabilities, found the unitary conceptualisation was widely used, yet findings were arbitrarily applied to other dimensions (Hannah & Pliner, 1983).

Critiques of the two-dimensional view of attitude mirror issues common to the debate surrounding a unitary conception. Although the theory of planned behaviour is gaining some attention in the literature it is still a relatively new conceptualisation requiring further empirical investigation (Tesser & Shaffer, 1990).

Critics of the tripartite conceptualisation purport that while the model has been widely accepted in theory, it has virtually been ignored in research practice, having little real impact (Triandis, 1971; Ajzen & Fishbein, 1980). A major reason cited for this lack of application is the failure to provide operational definitions of the three levels of attitude. Research reviews suggest that some level of operationalisation is essential if the tripartite model is to be regarded seriously (Cacioppo, Petty & Jeen, 1989; Fazio, 1989; Zanna & Rempel, 1988).

In conclusion, the major area of debate surrounding attitude structure continues to focus upon the unitary versus the tripartite conceptualisation. It is noted that the majority of current texts and research papers favour the traditional tripartite view (Olson & Zanna, 1983; Myers, 1983). This trend is mirrored in research on attitude change toward people with disabilities (Shaver, Curtis, Jesunathadas & Strong, 1989; Chubon, 1992).

A further area of debate in the literature relates to attitude definition. It is generally accepted that any study of attitude formation or change must have a strong theoretical underpinning of both attitude theory and definition.

Attitude definition

Attitude definition and structure are interrelated. The conceptualisation of attitude structure included in research is closely related to the stated definition. This relationship is often ignored and has been problematic in the development of reliable empirical studies of attitude formation and change in regard to people with disabilities (Shaver, Jesunathadas & Strong, 1989; Chubon, 1992). However, a variety of definitions of attitude is evident throughout the literature.

The major theme in definitions of attitude across the early twentieth century has been the 'readiness to respond' conception. Allport's (1935) broadly based definition was extremely influential in early research:

"An attitude is a mental and neural state of readiness, organised through experience, exerting a directive or dynamic influence upon the individual's response to all objects and situations with which it is related."

There is general consensus throughout both early and more recent literature that an element of evaluation lies at the base of an understanding of attitudes (e.g. Ostrom, 1969; Eagly & Chaiken, 1992). A commonly cited definition views attitude as the amount of affect for, or against, some object, as a function of the beliefs held about that object and the evaluation of those beliefs (Fishbein & Ajzen, 1975). However, this definition is criticised as too broad, with contemporary definitions becoming more specific, reflecting the theoretical assumptions made by the theorist (Tesser & Shaffer, 1990).

The 'knowledge' function of attitudes is emphasised in more recent definitions of attitude (Fazio, 1986). This view is in line with functionalist theorists (e.g. Katz, 1960) who define attitudes as

summary judgements of an object or event which assist individuals to structure their complex social environments. Within this conception attitudes are viewed as items of social knowledge built from experiences, beliefs and feelings generated by the attitude objects. This conception differs from previous definitions as it accounts for prior knowledge and experience.

Zanna & Rempel (1988) have defined attitudes as evaluative appraisals of objects, proposing that affect (i.e. emotion), cognition and behaviour form three classes of information on which this evaluative judgement is based. This view regards attitudes as separate cognitive entities which, consequently, may be accessed from memory independent of the affective cognitive or behavioural information on which they are based (Fazio, 1989).

A study of the literature related to attitude definition identifies three major factors consistently emphasised in the literature (McGuire, 1985; Zanna & Rempel, 1988), as follows:

- i. attitudes are always directed towards objects. This property distinguishes attitudes from general affective states like moods (objects are understood generally to include physical objects, social objects, behaviours and social issues),
- ii. attitudes are learned, presumably through the process of socialisation, and
- iii. attitudes are always concerned with the evaluative dimension of for or against, like or dislike, or approach or avoidance. In other words, attitudes are concerned with an evaluative reaction to objects, whether affective, cognitive or behavioural.

A recent critique of attitude and attitude change suggests that most attitude theorists agree on the following points (Olson & Zanna, 1993);

- i. evaluation constitutes a central, perhaps predominant aspect of attitudes,
- ii. attitudes are represented in memory, and
- iii. affective, cognitive and behavioural antecedents and consequences of attitudes can be distinguished.

In summary, it is noted that the area of attitude structure continues to be a contentious issue with little consensus evident in the literature. Accordingly, definitions of attitude vary, and are dependent upon the theoretical model of attitude structure endorsed by the author. Overall, the literature is dominated by two major views of attitude, neither of which satisfactorily account for all the data. The ongoing debate surrounding attitude structure and definition remains a major challenge for future research on attitude formation or change.

Contemporary models of attitude

As previously identified, models of attitude structure and definition most commonly incorporated in both general and disability research, are the tripartite and unitary conceptualisations (Table 3.1). This is evidenced by the inclusion of these models in introductory social psychology texts, which often ignore alternate theories, highlighting the continuing debate regarding conceptual agreement (Olson & Zanna, 1983; Myers, 1983).

Research critiques of studies on attitude towards people with disabilities continually identify the necessity to link the processes of

attitude formation and change in future empirical studies (Donaldson, 1980; Hannah & Pliner, 1983; Shaver, Curtis, Jesunathadas & Strong, 1987, 1989; Chubon, 1992).

Thus, a model of attitude definition and structure with clear and significant implications for methodological improvements is a necessary pre-requisite to future research. Current debate regarding models of attitude definition and structure focus on three major areas which must be addressed in future attitude research:

- i. The need to integrate the previous approaches or at least find some level of conceptual agreement as to attitude structure (Zanna & Rempel, 1988; Tesser & Shaffer, 1990),
- ii. The need to address the supposed enduring nature of attitudes. Common definitions represent attitudes as relatively stable and enduring (Ajzen, 1984). In contrast, others suggest that attitudes change according to influential circumstances and experiences such as past behaviours (Bem, 1972) as well as reactions to external cues (Salancik, 1974). It is further stressed that attitudinal responses cannot be presumed to be enduring, further necessitating that the three components of attitude be empirically validated (Zanna & Rempel, 1988), and
- iii. The need to address the relationship between affect and evaluation. The majority of past research acknowledges the evaluative element of attitudes. In some, affect and evaluation are viewed as distinct entities (Mills, Jellison & Kennedy, 1976; Abelson, 1982). Alternatively, they are viewed as similar in form (Zajonc & Markus, 1982; Ajzen, 1984). This is of particular relevance to attitudes towards people with disabilities where the

element of affect has not always been isolated and examined. Yet, anecdotal as well as empirical evidence suggests that the construct 'strain in social interaction' defined as feelings of uneasiness and discomfort regarding interactions with people with disabilities, (Siller, 1984) is influential in attitude formation (Evans, 1976; Nicoll, 1988; Gething, 1991a).

It is further suggested in the literature that debate regarding the tripartite view of attitude stems from the lack of a clear definition of affect (Zanna & Rempel, 1988). This is particularly evident in literature related to attitude change toward people with disabilities wherein 'affect' has been used to refer to a range of thoughts and actions from like/dislike to approach/avoidance with evaluation ranging from strong through to ambivalent and weak (Shaver, Curtis, Jesunathadas & Strong, 1989).

It is also suggested that subsequent usage of the term 'affect' be restricted to situations where emotions or feelings are present in an experiential sense (in that they have actually been experienced by the subjects) and that these be distinguished from the cognitive categorisation of an object or event along an evaluative dimension (Abelson, 1982; Zanna & Rempel, 1988). This recommendation has ramifications for disability research as subjects are likely to have affects (i.e. emotions or feelings) towards people with disabilities, as well as overall evaluations (for example, assessment of general attitudes on an evaluative measure). These suggestions lead to the necessity to examine the literature related to attitude measurement, as discussed in the following section.

Measurement of attitudes.

Methodological issues present a major challenge to the measurement of attitudes. Thurston, Willet & Wideman (1985) found the greatest barrier to achieving a valid methodology was the limited availability of valid and reliable measures of attitude.

It is asserted that the construction of tests to measure areas such as cognitive development is comparatively easy when compared to attitude measurement as there is usually a pool of facts, concepts and principles and right and wrong responses (Thurston, Willet & Wideman, 1983). However, as attitudes are not concrete entities, and because there are no 'correct' external reference keys, their measurement is more complex (Messick, 1979).

In a critique of the variety of attitude measurement tools available it is suggested that the investigation of the formation, structure, correlates and modification of attitudes towards people with disabilities requires innovative experimental methods and psychometrically sound instruments which are reliable, valid and multi-dimensional (Antonak & Livneh, 1988).

A range of attitude measures are described throughout the literature including self-report measures and reports about others. The most common technique for measuring attitudes continues to be global self-reports, such as rating of the attitude object on a bipolar evaluative dimension (Olson & Zanna, 1993). However, semantic-differential scales are commonly used in attitude measurement where the respondent is asked to indicate a level of agreement to the attitude object (Osgood, Suci & Tannenbaum, 1957). Rating scale techniques are

also commonly used including Thurstone (Thurstone & Chave, 1929) and Likert (1932) type scales. In addition, sociometric techniques involving rating the social dynamics of a group, social distance scales which assess choices in social interaction and friendship and open-ended questionnaires have been used. Soder (1990) asserts that the measurement of attitudes toward people with disabilities, is a useless and time-wasting exercise unless accompanied by precise implications and recommendations. He further asserts that the two-way relationship between attitudes and possible resultant behaviour must also be acknowledged, as discussed in the following section (Soder, 1990).

The attitude-behaviour relationship

Although not directly examined in this study, the relationship between attitude and behaviour is a critical component of any study of attitude formation and change. While it is accepted that attitudes affect behaviour, an important insight provided by social psychology is that behaviour also affects attitudes (Olson & Zanna, 1993).

Attitudes reflect the way a society define their beliefs and, in turn, set up a framework within which behaviour is exhibited (Olson & Zanna, 1993). For example, if people with disabilities are attributed specific stereotypes such as weakness and dependency, behaviour of others will be directed toward those attributes. The influence of this relationship can directly influence the lives of people with disabilities as similar attributions are spread to all facets of a person's life. This is known as the spread phenomenon (Wright, 1983, 1988). It is possible that, within this framework, the attitude-behaviour relationship can

become a self-fulfilling prophecy with the expectation of the attributed stereotype setting up the specific trait.

A number of attitude researchers are concerned with understanding social behaviours and view attitudes as an emotion laden mindset that serves as a hidden motivator for behaviour (Rajecki, 1982). This is important in disability related research as studies are concerned with negative and harmful reactions by the general public and individuals directly involved with people with disabilities. Thus, definitions of attitude based on the assumption of a cognitive-affect-behaviour linkage, such as the one used in the present study, are best suited to the pursuits of studies of attitude toward people with disabilities (Chubon, 1992).

The previous sections have discussed the structure, definition and measurement of attitudes generally and attitudes toward people with disabilities specifically. Before a conceptual model of attitude definition, formation and change can be developed for this study, an examination of the theoretical explanations posited in related literature and research must be considered. The following sections discuss theoretical explanations of attitude formation and change toward people with disabilities and proposed sources of negative attitude.

Theoretical explanations of attitude formation and change toward people with disabilities

Introduction

There has been a variety of theoretical attempts to explain the development of attitudes toward people with disabilities, the majority based on sociological and psychological perspectives. A recent critique

of research on attitudes toward people with disabilities classifies attitude theories into four specific areas; stimulus-response, consistency, social judgement and functionalist (Chubon, 1992). There is general consensus in the literature that these broad-ranging attempts to classify attitude theory have collectively served to illustrate the complexity of theorising in this area (Kiesler, Collins & Miller, 1969; Donaldson, 1980; Clunies-Ross & O'Meara, 1989; Chubon, 1982, 1992). It is also suggested that theorising in this area of attitudinal research is at a relatively simplistic level in that assumptions are not made explicit, relations between theoretical constructs are unclear and details necessary for precise predictions are missing (Kiesler, Collins & Miller, 1969; Antonak & Livneh, 1988; Chubon, 1982, 1992). Moreover, no one theoretical framework has attained universal acceptance in disability related research with large voids remaining in an explanation of attitude formation and change with people with disabilities (Chubon, 1992). These issues and assertions continue to be pertinent to an analysis of current research into attitudes toward people with disabilities (Horne, 1985; Clunies-Ross & O'Meara, 1989). An overview of sources of negative attitudes and major psychological and sociological explanations of attitude formation are necessary to aid an understanding of the theoretical bases of disability related attitude research, as discussed in the following sections.

Sources of negative attitude

It is necessary to examine sources of negative attitude cited in the literature to further understand research into attitude and attitude change toward people with disabilities. Many sources of negative attitude are proposed, ranging from the nature of contact and past experience to those associated with feelings of fear and aversion.

Livneh (1982, 1988) places the sources of negative attitude along six dimensions as follows:

- i. Sociocultural-Psychological sources: origins of negative attitudes along this dimension range from those associated with social and cultural values as well as norms relating to issues such as stigma and deviance to those triggered by more personal experiences (e.g. viewing disability as a punishment for sin or feelings of ambivalence).
- ii. Affective-Cognitive sources: these vary from those influenced by emotional reactions such as anxiety, guilt, fear, to those characterised by intellectual reactions, such as lack of self-insight, inability to tolerate ambiguity and cognitive dissonance.
- iii. Conscious-Unconscious sources: these range from those of which the observer is considered to be fully aware to those of which he or she is assumed to be totally unaware.
- iv. Past experience-Present situation sources: these vary from those experienced in early childhood (e.g. child rearing practices and parental influences), any prior experiences with people with disabilities to current experiences particularly negative or unsatisfactory contact.
- v. Internally originated-Externally originated sources: these relate to the non-disabled individual observer (e.g. specific demographic or personality correlates) to those related to characteristics associated with the person with the disability or the disability itself.

- vi. Theoretical-Empirical sources: these range from those based on purely theoretical or speculative formulations to those derived from empirical research findings, including a range of demographic factors such as gender, age and level of education of the person without a disability.

While Livneh (1982, 1988) suggests a wide range of possible sources of negative attitude, few of these have been developed as theoretical models in research examining attitudes toward people with disabilities. The limited number of studies which link origins of negative attitude with attitude change or show evidence of a theoretical foundation is repeatedly cited in the literature (Evans, 1976; Donaldson, 1980; Hannah & Pliner, 1983; Shaver, Curtis, Jesunathadas & Strong, 1989; Chubon, 1982, 1992).

Studies which use a theoretical base for models of attitude change or formation, in relation to people with disabilities, tend to focus on either general sociological theories of labelling and deviance or more specific psychological phenomena including cognitive dissonance and consistency theories.

Sociological explanations of attitude formation and change toward people with disabilities

Labelling or deviance theory

Some authors take the stance that origins of attitudes toward people with disabilities, and resultant discriminatory practices, are part of a general prejudice toward people who are different. This theory, generally known as labelling or societal reaction theory, has its base in the sociological view of deviance. Proponents of this theory involved

in disability research derive much of their work from Goffman (1968) who suggested that people with disabilities are labelled and stigmatised, with such stigma often acting as a master status determining the nature of their interaction with others. Wright (1960, 1980, 1983, 1988), has extended this theory by proposing that stigmatising labels, which tell little about individual characteristics, spread to incorporate a total negative devaluation of the person so labelled. Studies of people with mental illness have shown that, once labelled, persons believed to be deviant are dehumanised and treated differentially as 'non persons' (e.g. Goffman, 1961; Rosenhahn, 1973). These theoretical assumptions related to labelling have been widely used in related research and writings (Friedson, 1965; Safilios-Rothschild, 1970; Gove, 1982; Oliver, 1990; Zola, 1994).

Sociologists suggest that a person's view of what is 'normal' and what is 'deviant' stems from their socialisation process, with social interaction the main means by which socialisation is effected (Sargent, 1993). As people with disabilities do not fit the 'norm' and are labelled as different or deviant, they are subsequently devalued by mainstream society. Sociologists assert that a dominant feature of Australian culture is the strive for upward social mobility in terms of occupational, economic and social status (Sargent, 1993). Members of minority groups who do not meet this ideal are devalued and marginalised.

Current literature taking a sociological perspective, calls for a major paradigm shift toward a conceptualisation of disability as a social construction (Oliver, 1990; Rioux, 1991, 1994; Zola, 1994). This construction of disability takes the view that labelling creates a social world which renders people with disabilities as socially inferior and

precludes them from equal participation. Research which does not reflect a strong theme of social equality for people with disabilities reinforces and justifies this differential treatment. This view is in direct opposition to the medical/curative agenda of previous disability research which perpetuates the myth of 'difference' and legitimates devaluation (Rioux, 1991, 1994). Hence, service providers and policy makers are required to make the paradigm shift from a therapeutic model of service provision which is often over-protective and restrictive to one wherein people with disabilities are empowered to take risks and make choices (Rioux & Bach, 1994). Such a transition in models of theorising about disability may cause tensions between policy requirements and service practices. Service providers caught up in this process of transition may need to re-evaluate past practices and beliefs. The education and support of staff during this period is a critical pre-requisite to the smooth transition of models of service delivery (Rioux & Bach, 1994). Implications for programs of attitude change as well as the development of tertiary curricula in response to current developments are evident.

Psychological explanations of attitude formation and change toward people with disabilities

i. Consistency theories.

The most common psychological rationale underpinning studies of attitude change are variants of consistency theory, also referred to as balance or equilibrium theory. These theories assume that individuals strive toward consistency in their beliefs, attitudes and behaviours (Ajzen & Fishbein, 1980). They are based on the theories of Fritz Heider (1958) and Kurt Lewin (1948).

The theory of cognitive dissonance (Festinger, 1957) is a commonly cited theoretical model in research on attitudes toward people with disabilities. Cognitive dissonance arises when there is inconsistency between two cognitive elements, representing either beliefs, attitudes or behaviour. It is possible that cognitive dissonance toward people with disabilities develops due to their limited community visibility. When exposure to people with disabilities does take place it is often in an extremely stereotypical context, for example; individuals selling badges outside railway stations, groups of schoolchildren from a special school on an outing, or media articles which strengthen and highlight difference rather than similarity (Margolis, Shapiro & Anderson, 1990). Cognitive dissonance arises from the practice of segregating people with disabilities from mainstream society. Moreover, if societies' exposure to people with disabilities is within an institution, or as recipients of some form of charity, the prevailing image is one of weakness, difference and even illness.

Cognitive dissonance can also result from feelings of guilt, aversion and fear in relation to people with disabilities. In two Australian studies of attitude change, Gething (1986) and Nicoll (1988) discuss the cognitive anxiety members of society feel in their interactions with people with disabilities and suggest this as a possible source of negative attitude.

When balance or consistency models are cited in attitudinal change research they are most commonly based on Lewin's (1948), theory of attitude change. This model assumes that attitude modification or change requires an unbalancing or unfreezing of presently held attitudes, either by reducing a restraining force, such as by reducing discomfort, uneasiness, anxiety, uncertainty or by increasing a driving

force (i.e. presenting information that strongly contradicts a currently held stereotype, belief or emotion). In this sense, attitudes are at an equilibrium when driving and restraining forces are equal.

In a seminal study undertaken by Evans (1976) Lewin's attitude change theory (1948) is incorporated as a theoretical base for positive attitude change by examining the construct 'strain in social interaction' (Siller, 1964). Evans suggests that, within a Lewinian framework, strain in social interaction can be described as a force restraining the formation of positive attitudes due to the uneasiness, inhibition and uncertainty experienced in interactions. He successfully tested the hypothesis that people with disabilities can reduce the restraining force of discomfort by being open about their experience of living with a disability, identifying the curiosity of others and providing guidelines during interactions. Reduction in this restraining force led to an unfreezing of currently held negative attitudes and a consequent movement of those attitudes in a positive direction (Evans, 1976).

Nicoll (1988) also incorporated the Lewinian model in his study of attitude change. He suggested that attitudes consist of a number of peripheral beliefs underlying a core belief. It is necessary for these underlying beliefs to be changed before core beliefs can change. For example, peripheral beliefs relating to someone with cerebral palsy may include the following; all people with cerebral palsy have an intellectual disability, are immobile, use wheelchairs and cannot speak. Peripheral beliefs constitute a core belief such as; all people with cerebral palsy are unemployable (Nicoll, 1988). This model has similarities to the phenomenon of 'spread' as described by Beatrice Wright (1980, 1983) where stereotyped views of people with disabilities spread to encompass all elements of a persons' life.

Although balance models are repeatedly cited in studies of attitude change there is little evidence of any linkage between factors influencing attitude formation and subsequent attitude change (Evans, 1976; Donaldson, 1980; Shaver, Jesunathadas & Strong, 1989).

It is clear from the research that the use of theoretical bases underlying attitude formation and change exists, but is not widespread. Although the debate about theoretical foundations of attitude formation and change remains dominant in general literature this is not evident in literature specific to disability (Hannah & Pliner, 1983; Shaver, Jesunathadas & Strong, 1989). Instead, this literature focuses on an identification of factors influential in the formation of attitudes. A review of these factors is a necessary pre-requisite to the formulation of the research design of this thesis.

ii. Strain in social interaction

The construct 'strain in social interaction' as originally proposed by Siller (1964) is documented as significant in the development of negative attitudes toward people with disabilities. Strain in social isolation refers to the uneasiness, discomfort, inhibition and uncertainty experienced by people who do not have a disability in their interactions with people with disabilities (Siller, Chipman, Ferguson & Vann, 1967; Evans, 1976; Gething, 1994b). A general feeling of discomfort is a common emotional response in interactions with people with a disability (Roush, 1986). Such discomfort results from feelings of fear, pity, anxiety or uncertainty regarding appropriate behaviour in interactions (Harasymiw, Horne & Lewis, 1976; Roush, 1986; Amsel & Fichten, 1988). Consequently, future interactions with people with disabilities may be either avoided or short-lived. This

construct has been identified as a possible factor in the creation and maintenance of negative attitude toward people with disabilities in a number of sources (e.g. Siller, Chipman, Ferguson & Vann, 1967; Evans, 1976, Donaldson, 1980; Gething, 1994b).

The inclusion of this construct within the study under discussion is supported by its similarity to the reports of discomfort and strain in nursing students' interactions with people with disabilities (Roden, 1989). Similarly, inefficacious feelings as described by Bandura (1977a, 1986), as discussed in the following section, mirror the descriptions of discomfort, unease and resultant avoidance of future interactions.

Self-efficacy as a construct in attitude formation and change

The feelings of fear and lack of competence in interactions with people with disabilities reported throughout the literature have conceptual similarity to the inefficacious feelings as described by Bandura (1977a, 1986) in his definition of the construct of self-efficacy. Self-efficacy is examined in this study in regard to students' feelings toward future interactions with people with disabilities. It is posited as a mediating variable influencing attitude formation and change and is operationalised as efficacious or inefficacious feelings toward future interactions with people with disabilities. Because self-efficacy has not been explored in previous empirical research on attitudes toward people with disabilities, and it has a major role in the theoretical conceptualisation of this study, it is discussed in depth.

Perceived self-efficacy is defined as a person's judgement of his/her capability to organise and execute courses of action required to carry out designated types of performances (Bandura, 1986). In this sense, self-efficacy is concerned with judgements of what one can do with skills

one possesses. This is especially relevant when the situation or interaction to be experienced is new, ambiguous or unpredictable such as nursing and teaching students' first 'professional' contact with people with disabilities as part of their mandatory practicum experience.

Similarly, decisions we make about our daily lives are partly determined by choice behaviour, including choice of activities. Bandura (1986) asserts that individuals tend to avoid situations and tasks they think they might not be able to cope with, but willingly undertake activities they believe are within their capabilities. Perceived inefficacy can lead to self doubt and can induce people to make decisions about their lives which affect growth of competency (Bandura, 1977b). As a result, psychosocial functioning is affected and problems or unfamiliar situations seem unsolvable. Alternatively, when a sense of self-efficacy exists, solutions are readily sought to problems previously viewed as difficult. Consequences of perceived inefficacy have ramifications for all facets of education, particularly learning and behaviour change.

Bandura (1986) purports that self-efficacy beliefs affect a person's behaviour through motivational, cognitive, and affective intervening processes. As much human behaviour is regulated by an individuals' cognised goals, in turn, personal goal setting is influenced by self-appraisal or beliefs regarding capabilities. It follows that the stronger perceived self-efficacy, the higher the goals people set for themselves, and the firmer their commitment to them (Locke, Frederick, Lee & Bobko, 1984; Taylor, Locke, Lee & Gist, 1984). Thus, an individual's perception of his or her self-efficacy influences subsequent action. This can be directly applied to an individual's experiences with people with

disabilities regarding the fear and anxiety expressed regarding future interactions.

Bandura (1986) asserts that an individual's perception of self-efficacy influences the type of anticipatory scenarios they construct and reiterate. Those with a strong sense of efficacy visualise success scenarios which provide positive guides for performance, while those who view themselves as inefficacious are more inclined to visualise failure scenarios that undermine performance by dwelling on what will go wrong (Bandura 1977a, 1986). Cognitive simulations in which individuals visualise themselves executing activities have been shown to enhance subsequent performance (Bandura, 1986; Feltz & Landers, 1983; Kazdin, 1978, 1979). Major implications for the development of programs of attitude change toward people with disabilities are evident.

An individual's self-efficacy beliefs also determine his or her level of motivation, as reflected in how much effort he or she will exert in an endeavour and how long he or she will persevere in the face of obstacles. When faced with difficult situations, people who doubt their capabilities slacken their efforts or prematurely abandon their attempts. Alternately, individuals with stronger beliefs in their ability to cope with the task or situation at hand, exert a greater effort and are more likely to succeed (Bandura & Cervone, 1983, 1986).

It follows that those with strong beliefs in their capabilities are more persistent in their efforts (Bandura, 1988). This relationship can be applied to the self-efficacy beliefs of professionals who interact with people with disabilities. The instigation of programs of independent living or individualised educational programs require perseverance,

effort and self beliefs of competence on the part of the professional and the person with a disability. The possible influence of strength of self-efficacy regarding future interactions with people with disabilities and the success of school and community-based integration is evident.

The basic notion of self-efficacy focuses upon individuals' perceptions of the degree to which they can produce and regulate events in their lives (Bandura, 1977a, 1977b, 1982a, 1982b, 1982c, 1993). Individuals who are forced into settings and situations where failure is experienced are more likely to develop low feelings of self-efficacy regarding similar scenarios. An analogy can be drawn to the experience of nursing students on clinical placement in an institutional environment with people with disabilities as documented in the literature (Roden, 1989). The fears and anxieties expressed regarding future interactions with people with disabilities show similarity to inefficacious feelings. Similarly, teachers' self-reports of lack of competence to teach students with disabilities in integrated settings may also reflect inefficacious feelings, resulting in negative attitude (Stephens & Braun, 1980; Hannah & Pliner, 1983).

Bandura (1977a, 1986) asserts that self-knowledge about efficacy is based on four major sources of information as follows:

- i. Performance attainments: Specific enactive attainments provide the most influential source of efficacy information as they are based on authentic mastery experiences (Biran & Wilson, 1981; Collins, 1982; Schunk, 1990). Feelings of self-efficacy are raised by success experiences and lowered by repeated failure. Any attempt at a new, possibly unknown, experience, depends upon pre-existing self perception. Repeated success builds self-efficacy to

such strength that occasional failures will not have a great effect upon an individual's self appraisal.

The extent to which an individual alters their perceived efficacy through performance experiences depends upon a variety of factors. One of these is attribution of poor performance. Schunk & Gunn (1986) report that perceived self-efficacy is both a determinant of causal attributions and a mediator of their effects upon performance. Bandura (1986) stresses that the extent to which people will alter their perceived efficacy through performance experiences depends upon the difficulty of the task, the amount of effort expended, external assistance received, performance circumstances and the ongoing pattern of their successes and failures. Cognitive appraisals are important in these circumstances in that they may affect the impact of performance accomplishments or judgments of one's self-efficacy. Nichols & Miller (1984) found that people came to view effort as inversely related to capabilities.

Self observation is cited as enhancing self-efficacy when successes are noted and remembered, such as the use of video to assess pre- and post-intervention (Dowrick, 1983). In this research errors or mistakes were edited before participants viewed themselves on tape, leading to a definite improvement in performance compared to initial levels.

- ii. Vicarious Experiences: Appraisals of self-efficacy are partially influenced by vicarious experiences (e.g. watching or visualising similar people to oneself successfully perform a like task). There are several conditions under which appraisals of self-efficacy are

especially sensitive to vicarious information including the amount of uncertainty an individual possesses in relation to their capabilities (Bandura, 1986). Individuals with limited prior experience on which to assess their competence will be affected by vicarious experiences.

Modelling is the most commonly used technique to enhance the cognitive processing of vicarious information. Modelling influences which convey effective coping strategies can boost the self-efficacy of individuals with competent models teaching effective strategies for dealing with challenging or threatening situations. This technique has been widely used by Bandura and his colleagues in the treatment of a variety of fears and phobias (Bandura, Adams, Hardy & Howells, 1980).

Specific methods for enhancing self-efficacy using vicarious procedures include symbolic modelling and coaching techniques related to social skill learning (Gresham, 1981, 1984). It is emphasised throughout the literature that modelled performances are more likely to be effective when models are similar in age and gender (Davidson & Smith, 1982).

Furthermore, research confirms that interaction with a similar aged peer with a disability who life is socially valued, leads to positive attitude change in non-disabled observers (Donaldson, 1980; Wright, 1983).

- iii. Verbal Persuasion: This method of enhancing self-efficacy is reported to be less effective than other models due to lack of evidence of long lasting changes (Bandura, 1986). Verbally enhanced efficacy can be quickly disconfirmed by one's own

actions and inefficacy can easily be perpetuated by negative verbal persuasion (Bandura, 1986). These factors have strong educational implications in relation to the consequences of instructional methodologies and appraisals of students by teachers. The impact of such verbal persuasion upon a person's self-efficacy directly relates to the recipient's confidence in the person interacting with them, with presenter's credibility a powerful mediator.

- iv. **Physiological State:** An individual's physiological state has a strong impact upon his or her efficacy judgements. People who are tense, often experience rapid heart rate and breathlessness and feel less efficacious about undertaking an unknown task. Fear reactions can be so extreme that they generate further fear.

Interventions which lessen emotional arousal heighten perceived self-efficacy with a corresponding improvement in performance. For example, research undertaken with spider phobics showed how strengthening self-efficacy beliefs could decrease the physiological stress response (Bandura, Tay, Williams, Mefford & Barchas, 1985).

An individual's cognitive appraisals of his/her physiological states are affected by a variety of factors. Such factors as appraisal of the sources of arousal including level, specific circumstances and past experiences are important. This has led to subsequent rehabilitative programs which raise the efficacy levels of phobic individuals (e.g. Bandura, 1989, 1992).

A variety of strategies may be used to develop models which raise levels of self-efficacy. These are specific to the four major sources of knowledge about self-efficacy and are outlined in Table 3.2.

Table 3.2: Self-Efficacy Expectations
Source

Mode of Induction

Performance Accomplishments	<ol style="list-style-type: none"> 1. Participant modelling 2. Performance desensitisation 3. Performance exposure 4. Self instructed performance
Vicarious experience	<ol style="list-style-type: none"> 1. Live modelling 2. Symbolic modelling
Verbal persuasion	<ol style="list-style-type: none"> 1. Suggestion 2. Exhortation 3. Self-instruction 4. Interpretive treatments
Emotional arousal/ Physiological state	<ol style="list-style-type: none"> 1. Attribution 2. Relaxation, biofeedback 3. Symbolic desensitisation 4. Symbolic exposure

From: A. Bandura (1977a) *Self-Efficacy: Toward a Unifying Theory of Behavioural Change*, *Psychological Review*, 84, 191-215.

This table describes specific treatments or modes of induction appropriate to the four sources of knowledge of self-efficacy: performance attainments, verbal persuasion, vicarious experience and physiological state. These are useful considerations for those involved in the development of programs aimed at raising self-efficacy and are influential in the development of the experimental treatments applied in Stage II of this study as outlined in Chapter 9.

In the majority of cases theoretical underpinnings to research on attitude and attitudinal change toward people with disabilities tend to be global, studying the general reaction of society towards people with

disabilities. Discussion of theories explaining more specific, individual attitudes is limited. Even balance theories which are more likely to take the construct 'strain in social interaction' into account do not effectively explain the intrinsic psychological processes underlying an individual's emotions and actions in interactions with people with disabilities.

Rationale for the consideration of self-efficacy in this study

In working with undergraduate teaching and nursing students in the special education/disability area, the author noticed that one of the greatest barriers to acceptance and positive attitudes toward children and adults with disabilities was the fear and uncertainty expressed regarding future interactions. This recurring pattern was particularly marked in nursing students and was exhibited by strong negative emotions regarding clinical placements, working in the disability field and general attitudes toward people with disabilities. These observations are supported by literature reporting anecdotal (Roden, 1989) and empirical evidence (e.g. Brillhart, Jay & Wyers, 1990) suggesting that health professionals' attitudes toward people with disabilities may be more negative than the general community. It is likely that the fears expressed by nursing students are based on a mixture of past experience which reinforced stereotyped beliefs influenced by both the media and general community attitudes, along with strong feelings of personal inadequacy. The construct of self-efficacy mirrors the description of behaviours exhibited by students fears regarding future encounters, whereas other psychological constructs (e.g. self esteem or locus of control) do not sufficiently explain the nature of these self-beliefs.

Hence, in the present study, it is suggested that an individual's self-efficacy beliefs regarding interactions with people with disabilities is an underlying cognitive dimension missing from previous research. It is hypothesised that a positive relationship exists between level of self-efficacy toward future interactions with people with disabilities and general attitudes. In this sense, self-efficacy is a mediating variable accounting for feelings of fear and anxiety reported by individuals in their interactions with people with disabilities. This assumption also provides the theoretical base for one intervention model of attitudinal change empirically tested in Stage II of this study.

Research in the area of attitude formation and change provides a further rationale for the inclusion of the self-efficacy construct into this study. Models of attitude formation as expanded by Ajzen (1985) and Ajzen & Madden (1986) to include perceived behavioural control are viewed as complementary to Bandura's notion of self-efficacy (Maddox & Stanley, 1986). In this way, self-efficacy acts as a force constraining or controlling a persons' intention to behave. It is posited that, in interactions with people with disabilities, level of self-efficacy directly affects future interactions and may result in avoidance and negative attitudes. Similarly, alternative conceptions of attitude structure which account for behavioural intentions (e.g. Zanna & Rempel, 1988) may also incorporate self-efficacy as a variable worthy of further investigation.

The relationship between behaviour and self-efficacy

Empirical research by Bandura and his colleagues (Bandura, 1977b; Bandura, Adams & Beyer, 1977; Bandura, Adams, Hardy & Howells, 1980) has demonstrated positive correlations between therapeutic

changes in behaviour and change in self-efficacy. It is asserted that this behaviour holds over a variety of target behaviours and treatment procedures (Bandura, 1982b). In addition, experimental research strongly suggests that self-efficacy is a more powerful predictor of behaviour than either outcome expectancies or past performance (Bandura, 1977b; Bandura, Adams & Beyer, 1977).

There is little evidence of any examination of the construct of self-efficacy in disability research although research in the rehabilitation area suggests a relationship between the thoughts of a person regarding interactions with people with disabilities and level of comfort and self-efficacy beliefs (Fichten & Amsel, 1986; Amsel & Fichten, 1988).

Overall, the similarity between inefficacious feelings as described by Bandura (1977b, 1986) and discomfort and fear reported in interactions with people with disabilities (Evans, 1976; Donaldson, 1980; Roden, 1989) supports further examination.

Measurement of self-efficacy.

Bandura (1986) proposes three dimensions of efficacy judgement which have implications for performance and need to be included in measurement:

- i. level of efficacy judgement in that tasks can range from simple to more difficult,
- ii. generality of efficacy in that individuals may be able to generalise perceived self-efficacy to a variety of situations, and
- iii. strength of efficacy in that weak self percepts of efficacy can be easily negated by negative experiences while stronger ones will be maintained.

Bandura (1977a) argues that one of the theory's strengths is the specificity with which efficacy judgements can be matched to behaviour. The measurement of efficacy can take the form of a scale which lists a series of highly specific and carefully defined actions, for example, a hierarchy of feared behaviours (Bandura, 1982a).

However, while many studies have used behavioural hierarchies, unordered collections of related behaviours are also evident wherein individuals are asked to state whether or not they believe they can perform it (efficacy level), and, if so, to give a subjective rating of their confidence in that belief (efficacy strength) (Lee, 1984).

The validity of self appraisal measures is challenged in the literature, with the accuracy of reporting feelings about one's ability to undertake a particular task, questioned. However, both Bandura & Schunk (1981) and Schunk (1981) report that such self-appraisals are reasonably accurate and that any discrepancies which occur are more likely to arise from misjudgment of self-efficacy than from performance ambiguities.

Thus, the construct of self-efficacy is examined in the study as follows:

- i. In Stage 1 of the study the construct was operationalised and a tool developed and trialled which measured students' levels of self-efficacy regarding future interactions with people with disabilities, and
- ii. In Stage II of the study one treatment of attitude change was based on self-efficacy training. Pre and post test data were gathered using the tool developed in Stage 1 of the study.

In conclusion, theoretical explanations of negative attitudes toward people with disabilities vary across a range of sociological and psychological perspectives. However, the majority of research into attitudes toward people with disabilities disregard such theoretical foundations and focus on specific variables thought to be influential. Although there is no dispute as to the importance of these variables in the formation of attitudes toward people with disabilities, they need to be examined within a theoretical framework. These variables are discussed in the following section.

Major variables influencing attitudes toward people with disabilities

A variety of variables purported to influence attitudes toward people with disabilities are highlighted in the literature. These include variables which cannot be empirically tested, but which underlie attitude formation such as family beliefs, media exposure and government support. However, a number of variables which have been empirically tested, including demographic, experiential, psychological and affective influences. Contact with people with disabilities is repeatedly cited throughout the literature as an influential variable in attitude formation and change (e.g. Wright, 1988; Lyons, 1990). In the following review, contact is discussed both generally and in relation to literature specific to nurses and teachers. Although some generic variables are reported as influential in attitude formation of both nurses and teachers, there are specific differences in their effects, giving justification for a discussion of areas specific to each professional group. Major variables common to both groups are discussed in the following sections.

Demographic variables.

A variety of demographic variables have been isolated as influential in determining attitudes toward people with disabilities, namely, gender, age, and educational level. Results of their influence upon attitude remain undetermined.

Antonak (1981) investigated the relationship between a wide range of demographic predictors including age, gender, educational level, professional specialisation and frequency of contact with people with disabilities. His findings indicated a low multiple correlation coefficient of .25 between demographic predictors and attitude levels, concluding that attitudes are influenced by factors beyond demographic variables alone.

Gender has been isolated in a number of investigations, yielding conflicting results. There is some evidence to support the assertion that women are more willing to interact with people with disabilities, and have more positive beliefs about them (e.g. Tringo, 1970; Harasymiw, Horne & Lewis, 1976; Berrol, 1984; Paris, 1993). More recent evidence in support of these findings is limited. Critiques of research suggest that when gender differences occur they can be attributed to the influence of other variables such as information or contact (Yuker, 1977; Hannah, 1988)

Age is another variable posited as influential in attitude formation. Older subjects have been found to hold more positive attitudes towards people with disabilities (Berrol, 1984). Alternatively, younger teachers were found to be more willing to interact with students with disabilities than their older colleagues (Harasymiw, Horne & Lewis,

1976). However, findings remain inconclusive with no significant age related differences in attitude of subjects found across a number of studies (Hannah & Pliner, 1983).

Ethnic background has not been examined as a major influential variable although Paris (1993) found that non-Asian students had more positive attitudes toward people with disabilities relative to Asian students.

In conclusion, it appears that demographic variables do not have a strong influence on the formation of attitudes toward people with disabilities. It is only when demographic variables are linked with more influential variables, such as contact, that their influence is significant (Antonak, 1981; Hannah, 1988). The range of variables purported as most influential across all populations are discussed in the following section.

Contact with people with disabilities

Contact with people with disabilities is repeatedly cited as influential in attitude formation and worthy of further investigation (Evans, 1976; Amsel & Fichten, 1988; Gething, 1994a; Biordi & Oermann, 1993; Lindgren & Oermann, 1993). Yet, its effects are not clear, with suggestions that prior contact, the nature, extent and quality of contact, need further definition and empirical examination (Evans, 1976; Donaldson, 1980; Gething, 1988, 1991a; Amsel & Fichten, 1988). Much research has failed to explore the exact nature of contact including with whom the contact took place, relationship to the subject, the context of the contact and the frequency of interaction (Chubon, 1982, 1992; Wright, 1983).

Hence, it is clear that a range of issues related to an examination of the contact variable need to be addressed. Many researchers make the assumption that subjects have had little or no prior contact with people with disabilities leading to imprecise evaluations of contact as an intervention. The importance of accounting for prior contact is stressed throughout the literature (Wright, 1983, 1988).

Wright (1960, 1975a, 1975b, 1980, 1983, 1988), one of the most prolific and influential writers in the disability area, argues that people who have had little close contact with people with disabilities are more likely to perceive differences beyond those directly associated with the disability itself. She calls this phenomenon 'spread'. Negative spread involves the attribution of deficiency, while positive spread occurs when people are viewed as having superhuman characteristics which compensate for their disability. Examples of this phenomenon have been widely reported in research on attitudes toward people with disabilities (e.g. Yuker & Block, 1986; Gething, 1991b, 1992). It is also suggested that 'outsiders', those who have had little contact with people with disabilities often view the presence of disability as tragic, over-estimating the persons' limitations while underestimating their own capabilities (Wright, 1980). In this view, described by the author as a 'succumbing' view, a person's disability is seen as an overriding characteristic which pervades every area of life. On the other hand, an 'insider', someone who has had close contact with people with disabilities, is more likely to see a disability as only one dimension of the whole person and is likely to be more positive (Wright, 1980).

Within this conceptualisation, any limitations or negative factors relating to the lives of people with disabilities are viewed as due to extrinsic environmental influences rather than intrinsic personality

differences. Recent research in the rehabilitation field supports this view, calling for a shift from the medical paradigm which views people with disabilities as victims, to a perspective which promotes client empowerment and de-emphasises differences between people with and without disabilities (e.g. Lynch & Thomas, 1994).

The environment in which contact takes place is also thought to be influential in attitude formation, yet such contextual factors remain unexplored. It is purported that contact in places of employment, schools and social settings are more likely to affect attitudes positively than contact in medical settings or large impersonal institutions (Wright, 1980, 1983; Yuker, 1988).

Equal status contact

The importance of equal status contact, between people with disabilities and others is stressed in both early and more recent literature (e.g. Evans, 1976; Donaldson, 1980; Leonard & Crawford, 1989; Lyons, 1990; Paris, 1993) with the assertion that contact with people with disabilities whose lives are viewed as having social value are more likely to result in positive attitudes (Lyons, 1990).

The term 'quality of contact' is cited in the literature as influential in the development of positive attitudes with Wright (1980, 1988) suggesting that equal status interaction with an individual with a disability can be regarded as 'quality' contact. However, as few controlled studies isolate or define 'quality of contact' as an independent variable, its influence remains equivocal (Hannah, 1988).

A discussion of equal status contact has implications for health professionals' interactions with people with disabilities. The

idiosyncratic features of health professionals' interactions with people with disabilities immediately affords them a higher status position. The nature of a 'helper' or 'carer' role relegates the person with a disability to an inferior status leading to the perpetuation of negative attitudes (Roush, 1986; Yunker & Block, 1986; Geskie & Salasek, 1988). The power base in such interactions indisputedly remains with the professional and is reinforced in institutional settings by the wearing of uniforms, access to records, lack of privacy, control of daily activities and an emphasis on clinical, therapeutic programs (Geskie & Salasek, 1988; Rioux, 1991). It is possible that these roles may become entrenched, leading to the perpetuation of a stereotypical view of people with disabilities as those who are unquestionably accorded a lesser status with concomitant powerlessness and loss of privilege (Roush, 1986). The outcome of such interactions for people with disabilities, who may spend a great deal of their time within such an unequal role relationship, are of concern and give significance to this study.

Levels of contact

The proposition of different levels of contact with people with disabilities is becoming evident in the literature with empirical support emerging. A study undertaken by Leonard & Crawford (1989) hypothesised that attitudes can be divided into two types: attitudes at a social level (i.e., treatment in society) and attitudes at a personal level (i.e., personal interaction). Concomitant with this hypothesis is the belief that the specific form the contact takes influences the resultant attitude. In this sense, contact is not viewed as one-dimensional but as having a range of forms. When contact was manipulated as an experimental variable in an intervention study it was found that

personal contact changed attitudes at the personal level, including a reduction in personal prejudice (Leonard & Crawford, 1989).

Another study suggested three levels of attitude toward people with disabilities related to specific forms of contact including peer groups, professionals and the general public (Altman, 1981). Peer group contact and contact with significant others such as family and friends, is posited to lead to the most accepting attitudes. However, interactions with professionals such as health professionals, social workers, teachers and counsellors and employers are important as they influence the life direction of people with disabilities while interactions with the general public are equally critical as they influence proposed changes on an organisational, community or even the national level (Altman, 1981).

Altman's (1981) review of studies of attitudes toward people with disabilities addresses the issue of level of attitude and specific types of contact on a superficial level without any suggestions for future research. However, the importance of acknowledging and recognising the existence of different forms of contact cannot be underestimated and is of relevance to the present study.

Methodological issues in studies investigating contact

Studies which empirically investigate contact with people with disabilities without a precise research design or a sound theoretical base, report limited attitude change. The necessity to provide a strong conceptual base for any research into attitudes toward people with disabilities is repeatedly stressed throughout the literature (Antonak & Livneh, 1988; Chubon; 1982, 1992; Shaver, Curtis, Jesunathadas & Strong, 1989).

In a major review of research focusing upon contact, Yuker and Block (1986) found that the results of 318 comparisons obtained in 274 research studies concluded that 51% reported positive effects of contact, 10% negative effects and 39% non significant differences.

Current literature suggests that contact which is carefully controlled and supported by accurate information with a focus on the abilities and individuality of people with disabilities is a potent force for attitude change (Gething, 1994a).

Disability type in contact

The influence of the type of disability of the person with whom subjects have contact is also isolated as a possible variable influencing attitude formation (Rees, Spreen & Harnadek, 1991). A hierarchy of preference toward specific disability groups is discussed in the literature with people with physical or sensory disabilities usually higher on the preference list than those with intellectual or multiple disabilities (Harisymiw, Horne & Lewis, 1976; Furnham & Gibbs, 1984; Furnham & Pendred, 1983; Goodyear, 1983; Ashman, 1984). People with intellectual disabilities and visible physical disabilities are perceived by others as most 'handicapped' (Westbrook, Adamson & Westbrook, 1988). Studies undertaken with teachers and school personnel consistently report that students with physical disabilities are chosen as candidates for integration over those with intellectual or multiple disabilities (Center & Ward, 1987, 1989). It is concluded that the nature of attitudes towards specific types of disability is dependent upon a range of factors including visibility, type and extent of disability, type of stimulus evoked, reinforcement of existing stereotypes and past experiences (Antonak & Rankin, 1982; Gething, 1991b).

In summary, studies relating to contact with people with disabilities have yielded equivocal results. Findings indicate that the effect of contact upon attitudes toward people with disabilities is complex and is influenced by the particular type or quality of contact as well as a variety of contextual factors. Methodological flaws involving the provision of insufficient controls to isolate contact in relation to its type, form and extent are evident throughout much of the literature. It is clear that further research which examines the contact variable in more depth is necessary before strong conclusions can be drawn.

Literature related to attitudes of nurses and teachers cite specific variables as influential to the formation of attitudes toward people with disabilities. In some instances findings from studies of the two professional groups isolate similar variables and yield unequivocal results. However, distinct differences between the two groups emerge, and are relevant to the development of the research under discussion. Hence, literature related to attitudes of nurses and teachers toward people with disabilities are examined in the following discrete sections.

Specific variables influencing attitudes of nurses toward people with disabilities

As outlined previously, attitudes of health professionals are repeatedly cited in related literature as worthy of further investigation due to their influence upon service provision and resultant quality of life of people with disabilities (Pederson & Carlson, 1981; Chubon, 1982, 1992; Roush, 1986; Lyons, 1990; Gething, 1992, 1994a; Lindgren & Oermann, 1993). A growing body of research isolates attitudes of health professionals toward people with disabilities as possibly more negative than the general population (Sadlick & Penta, 1975; Roush, 1986;

Gething, 1988, 1991a). It is asserted that the therapeutic model which forms the basis of interactions between health professionals and people with disabilities leads to a 'gate-keeper' mentality wherein social participation is controlled and regulated (Rioux, 1991). The major influence of health professionals attitudes on the lives of people with disabilities is widely accepted in the literature and has led to the call for ameliorative measures to identify and modify attitudes during courses of training (Chubon, 1982), or more contentiously, the exclusion of people with negative attitudes from professional training (Yuker, 1977). Related literature identifies areas specific to the formation of nurses' attitudes to people with disabilities as discussed in the following section.

Nurses emotional responses to contact

Nurses report feeling overwhelmed and depressed in their interactions with people with disabilities. Resultant negative attitudes have been attributed to these emotions (e.g. Sadlick & Penta, 1975; Murray & Chambers, 1991; Biordi & Oermann, 1993). The nature of the disability itself is an issue for nurses who express frustration when they cannot assist a patient in attaining a total state of health (Geskie & Salasek, 1988).

An analysis of these findings lead to further questioning of the appropriateness of medical models of disability which take a 'curative' approach, focusing on health related issues.

Level and type of nurse education

A study investigating the relationship between level of education and attitude toward people with disabilities found that nurses with a

higher level of education (operationalised on level of qualification) were more likely to hold positive attitudes than those with less education (Lillis & Wagner, 1977). The authors assert that greater exposure of student nurses to the behavioural sciences leads to more positive attitudes regarding community integration of people with disabilities. An empirically based study which compared attitudes of beginning student nurses, those ready to graduate, registered nurses, nursing faculty staff and people with disabilities, found that nursing faculty staff were the least positive in their attitudes toward people with disabilities (Brillhart, Jay & Wyers, 1990). People with disabilities were most positive followed by registered nurses, beginning nurses and graduating nurses. Nurses' attitudes overall, whether faculty, registered or students, were found to be negative towards people with disabilities. Possible variables accounting for this negative attitude were not isolated.

A study which examined the relationship between attitudes toward people with disabilities, empathy and level of nursing education found that nurses with higher levels of training were more empathetic and positive towards their client group (Geskie, 1985). Again, type of education was isolated with nurses who had undertaken a significant number of social science courses (i.e. four or more) reporting more positive attitudes and higher levels of empathy towards people with disabilities (Geskie, 1985).

In conclusion, nurses' attitudes toward people with disabilities are consistently less positive than might be expected, based on their choice of becoming members of a 'helping profession'. Areas of major significance include; the specific nature of contact and interaction with people with disabilities, the emotional responses to these interactions

and the nature of the educational model provided. In conclusion, the necessity to investigate attitudes at the pre-registration level is identified due to the limited number of existing studies.

Specific variables influencing attitudes of teachers toward people with disabilities

Although many of the variables identified in general attitude formation to people with disabilities may apply to teachers, it is recognised that their specific professional interactions and the nature of their training may account for differences between themselves and other professional groups (Thousand & Burchard, 1990). For this reason, the following review of literature specific to teachers' attitudes is included.

Attitudes of teachers toward integration

The integration of students with disabilities into mainstream education has resulted in a proliferation of research aiming to establish variables which influence success. Results of studies yield unequivocal results, yet there is unanimous agreement that teacher attitude is a powerful determinant of the success of integration and that positive attitudes of educators cannot be assumed (Martin, 1974; Hannah & Pliner, 1983; Leyser, Johansen & Abrams, 1984; Center & Ward, 1987, 1989; Stone & Brown, 1987; Chow, 1991). In fact, many teachers show reluctance to teach students with disabilities, hold negative attitudes to integration and support the retention of special classes (Abramson, 1980; Hannah, 1988; Leyser & Lessen, 1988; Thousand & Burchard, 1990; Chow, 1991). A strong relationship is suggested between teachers' attitudes to integration, willingness to teach students with disabilities and general attitude to people with disabilities (Hannah, 1988).

These findings are significant in that the attitude of classroom teachers is posited as a more potent variable to the success of integration programs than any administrative or curriculum strategies (Center & Ward, 1987; Thousand & Burchard, 1990; Chow 1991). Fear and anxiety regarding ability to teach and interact with students with disabilities, along with lack of support services, are cited as major factors leading to both the rejection of individual students and the non-acceptance of integration (Center & Ward, 1987; Hannah, 1988).

Teachers' knowledge, experience and level of education

Much of the literature on teachers' attitudes to integration or to people with disabilities has focused on the relationship between cognitive dimensions, (e.g. knowledge of students with disabilities) and resultant attitudes. Teachers identify the need for knowledge and report limited access to information about students with disabilities as a major reason for fears regarding teaching competence (Schultz, 1982, Horne, 1983, Schmelkin & Lieberman, 1984, Nader, 1984, Knoff, 1985, Hannah, 1988). The 'mystique' of special education adds to the fear, insecurity and lack of confidence in teaching students with disabilities. The mythology related to this mystique is underpinned by the belief that 'special' knowledge and training is a necessity to teach students with disabilities, and is widely documented in the literature (Gow, McLellan, Balla & Taylor, 1987; Hickson, 1989). Fears perpetuated by those embracing this mythology may lead to a lack of support for integration. Suggestions that teachers' willingness to integrate students with disabilities increases concomitant with knowledge of special education either at pre-or post-service level (e.g. Stephens & Braun, 1980; Leyser & Lessen, 1988) need empirical validation.

Much of the research equates teacher knowledge with level of education, confounding the strength of the education variable. Also, the relationship between access to knowledge and resultant confidence and attitude need further exploration. An important question arising from the literature is whether knowledge leads to positive attitude and a concomitant willingness to teach students with disabilities, or whether a positive attitude leads teachers to seek out more knowledge.

In regard to level of experience, teachers' attitudes towards students with disabilities have been assessed at both the pre-service and post-service level in a range of studies (Drake, 1977; Skrtic, Sigler & Lazur, 1978; Schmelkin & Lieberman, 1984; Thousand & Burchard, 1990). The overwhelming majority report that teachers with varying backgrounds and at different stages of professional development, hold beliefs about people with disabilities similar to those held by the general public.

It cannot be presumed that the more experienced a teacher, the more positive their attitude toward integration or children with disabilities. Teachers who are more educated and more experienced have been found to hold less positive attitudes (Harasymiw, Horne & Lewis, 1976; Chow, 1991). Findings remain equivocal, with reports that teachers with higher degrees held more positive attitudes towards people with disabilities (Berrol, 1984).

The effects of inservice training on teachers' attitudes has also been isolated in a number of studies. The majority of findings report that teachers who had undertaken inservice specific to teaching students with disabilities viewed integration more favourably than cohorts who did not undertake inservice (e.g. Harasymiw, Horne & Lewis, 1976; Mandell & Strain, 1978; Stephens & Braun, 1980). Thus, education

specific to the area of disability was seen as a predictor of positive attitude.

Influence of pre-service courses in special education

It is stressed in a number of studies that attitudes of beginning teachers to students with disabilities is critical to both the success of integration programs and to the self esteem of students with disabilities (Westwood, 1984; Center & Ward, 1987, 1989; Stone & Brown, 1987; Rees, Spreen & Harnadek, 1991). Teachers' attitudes may be significantly modified by their pre-service training and the nature of their subsequent professional experience. Findings of related studies suggest that specific courses in special education are closely associated with both less resistance to integration (Center & Ward, 1987; Thomas, 1987) and the development of more positive attitudes (Westwood, 1984; Rees, Spreen & Harnadek, 1991; Eichinger, Rizzo & Sirotnik, 1992). There is overwhelming support for the assertion that the provision of pre-service training within undergraduate courses helps to moderate the anxiety teachers feel in their interactions with students with disabilities, increasing their willingness to teach students with disabilities and resulting in more positive attitudes (DeLeo, 1976; Mandell & Strain, 1978; Johnson & Cartwright, 1979; Naor & Milgram, 1980; Stephens & Braun, 1980; Powers, 1983; Leyser & Abrams, 1983; Harvey, 1985; Center & Ward, 1987; Rees, Spreen & Harnadek, 1991; Strong & Shaver, 1991).

Leyser, Johansen & Abrams (1984) suggests that the inclusion of the following factors in pre-service teacher education courses will result in positive attitude change:

- i. increased knowledge about the practice of integration, the specific needs of the population of students to be integrated, the availability of specific knowledge and the variety of instructional adaptations necessary; and
- ii. direct and supervised contact with students with disabilities in a variety of settings as well as personal contact with professionals working in this area.

Recent empirical studies and critiques of research validate the strength of direct, controlled contact with people with disabilities as a critical variable in positive attitude formation in pre-service teacher education students (e.g.; Rees, Spreen & Harnadek, 1991; Strong & Shaver, 1991; Eichinger, Rizzo & Sirotnik, 1992).

Feelings of competence

A number of findings identify a lack of confidence by teachers in their own instructional skills, and in the quality of support available to them regarding teaching students with disabilities (Harasymiw, Horne & Lewis, 1976; Center & Ward, 1987). While teachers may have adequate knowledge about students with disabilities they can lack the confidence in knowing their actions are appropriate (Hannah & Pliner, 1983). Studies report that teachers' confidence in their ability to teach students with disabilities is related to positive attitude (Stephen & Braun, 1980). It follows that self-beliefs of competence and resultant confidence underlie willingness to accept students with disabilities into regular classes necessitating further exploration (Hannah & Pliner, 1983). It is asserted in the present study that self beliefs of competence have similar cognitive dimensions to beliefs of self-efficacy.

In conclusion, major findings from a review of literature into factors influencing attitudes toward people with disabilities suggest that although the contact variable is influential for both nurses and teachers, idiosyncratic factors, such as the unequal role relationship between nurses and people with disabilities, are evident. Also, nurses' emotional responses to their professional contact with people with disabilities, result in reports of frustration and anxiety are not mirrored in studies on teachers, who are more likely to lack confidence in their professional competence. Conversely, the strong relationship evident between implementation of pre-service disability studies and resultant positive attitude has not been explored with pre-registration nurses, possibly due to the recent introduction of university based training and mandatory disability curricula. Reports of major factors influencing attitudes toward people with disabilities call for a review of literature focusing on strategies of attitude change. As this study examines both attitude formation and attitude change, including the testing of experimental models of attitude change, an examination of related literature and current theoretical models is necessary.

Attitudinal change toward people with disabilities: methodological issues.

Programs of attitudinal change generally take two forms: those which aim to change general community attitudes (e.g. Gething, 1984b; Fichten, Hines & Amsel, 1985; Leyser, Cumblad & Strickman, 1986) and those aiming to modify attitudes of more specific groups such as pre-service or practising teachers, health professionals or schoolchildren (e.g. Sadlick & Penta, 1975; McKerracher, 1982; Thurstone, Willet & Widerman, 1985; Gething, 1994b). Overall, programs targeting specific

groups have found to be more successful than those aimed at changing community attitudes (Gething, 1984b).

A review of studies of attitudinal change reveal a number of strategies and methodologies consistently used in related research. These include: information about people with disabilities which incorporate instructional models, role play and simulation, media presentations and group discussion. Contact with people with disabilities is also cited as an effective methodology incorporating direct contact, media contact and social participation.

Programs of attitude change which result in the most positive attitude outcomes are likely to include a number of these strategies, yet positive outcomes have resulted from the use of a lone model. Findings of programs which experimentally test a variety of approaches have been useful in the development of future models of attitudinal change, including those used in this study. Past research on attitude change in specific target populations can be grouped into two major categories:

- i. studies on the effect of contact with people with disabilities, and,
- ii. studies on the effect of knowledge or instruction on attitudes toward people with disabilities.

Further discussion of the most commonly used models of attitude change toward people with disabilities are included in Chapter 9 which reports and discusses findings of an experimental intervention aiming to test models of attitude change within a population of students holding negative attitudes.

Methodological implications for future research on attitude change toward people with disabilities

A number of issues with implications for future research into attitude change toward people with disabilities become evident from a review of the literature. Methodological limitations, in particular, the lack of a systematic application of theory and principles of attitude change and failure to address the affective or emotional side of attitudes and attitudinal change, are evident (Hannah & Pliner, 1983; Leyser, Cumblad & Strickman, 1986; MacMillan & Morrison, 1984; Towner, 1984; Clunies-Ross & O'Meara, 1989). Recent critiques of research focus upon the variation in experimental design and inconsistency in the incorporation of theoretical models which has made replicability difficult (Shaver, Curtis, Jesunathadas & Strong, 1989; Chubon, 1982, 1992).

It has also been suggested that methodologies of attitude change may influence specific levels or aspects of attitude (Florian & Kehat, 1987). For example, information and persuasion may be more likely to influence the cognitive component of attitudes, informal contact with people with disabilities may influence behaviour and disability simulation and role play influence the affective component (Florian & Kehat, 1987). Although there is no empirical support for this hypothesis, it gives strength to the assertion that a range of strategies need to be incorporated into attitude change interventions.

In conclusion, the study of attitude change toward people with disabilities remains controversial. Unfortunately, much of the research is not replicable and/or is characterised by flawed methodology. Overall, studies have shown that positive attitudes can

be fostered by exposure to constructive views of life with a disability through a variety of models including accurate information, direct experience in the form of carefully controlled contact and guided discussion (Donaldson, 1980; Gething, 1994a). Future research needs to empirically examine these findings within a framework of carefully designed and controlled studies which have both methodological and theoretical validity. An ideal program aimed at enhancing attitudes toward people with disabilities would be derived from a systematic theory of attitude formation and change (Clunies-Ross & O'Meara, 1989). These issues were taken into account in the development of the conceptual model for this study, as discussed in the following section.

Proposed conceptual model of the attitude construct

The continuing debate regarding previous views of attitude formation and change have led a number of researchers to focus on a re conceptualisation of the attitude construct. One such re conceptualisation forms the basis of the model of attitude structure and definition used in this study.

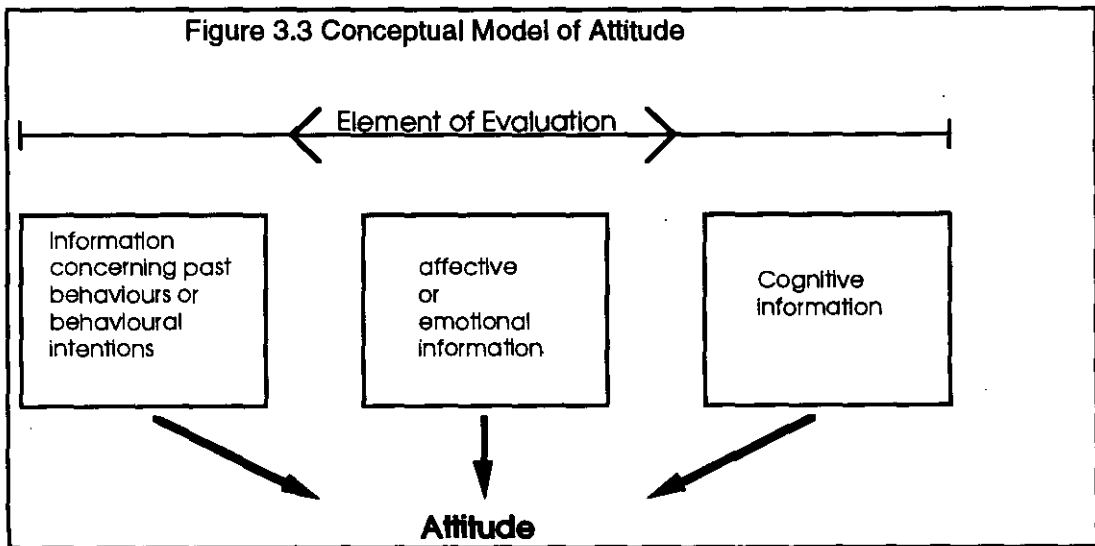
The definition of attitude underlying this research is broadly based and takes into account previous findings related to attitude research. It is based on the tripartite conceptualisation as this allows ease of integration and comparison of previous disability research which commonly incorporates this three dimensional model. Furthermore, recent research critiques suggest that the majority of attitude theorists agree that affective, cognitive and behavioural antecedents and consequences of attitudes can be distinguished (Olson & Zanna, 1993). The definition of attitude chosen for this study is specific in its delineation of the three components of attitude, as follows:

"An attitude is the categorisation of a stimulus object along an evaluative dimension based upon, or generated from, three general classes of information: cognitive information, affective/emotional information, information concerning past behaviours or behavioural intentions " Zanna & Rempel, 1988, p. 319.

This conceptualisation of attitudes is used as the theoretical base of attitude structure and definition in this study (see Figure 3.3). In Figure 3.3 it can be seen that attitudes are based on three classes of information:

- i. cognitive information,
- ii. affective/emotional information, and/or
- iii. information concerning past behaviours or behavioural intentions.

An explanation of this conceptualisation of attitudes follows: an 'evaluative dimension' is defined as one wherein a comparison or judgement is made about the value of the stimulus object (Zanna & Rempel, 1988). In its simplest form this can consist of two discrete categories (e.g. good/bad) or a relative comparison of one or more objects (e.g. better than/worse than). This becomes a continuum as the number of categories increase (e.g. a Likert-type scale with 8 categories ranging from strongly disagree to strongly agree). Most theorists implicate evaluation in their definitions of attitude (Olson & Zanna, 1993), with the assertion that evaluation is a pre-requisite to attitude formation. Moreover, once formed, attitudes predispose evaluative responses when the attitude object is subsequently encountered (Eagly & Chaiken, 1992).



adapted from Zanna & Rempel, 1988, p. 319

'Categorisation', refers to a process concerning some level of cognitive activity with the stimulus object clearly identified before judgements are made (Zanna & Rempel, 1988). Evaluation requires cognitive input with attitudes viewed as items of knowledge. It follows that in making evaluative judgement towards people with disabilities, the attitude content is influenced by strong emotional memories of past behaviours, experiences or interactions. It is stressed by the author that the power of emotional experiences and past behaviours should not be overlooked if researchers are to understand a true picture of attitude structure. When these factors are not included in a conceptualisation of attitude, evaluation is purely cognitive or knowledge based, not accounting for the way by which the attitude is experienced (Zanna & Rempel, 1988; Bem, 1972). Thus, although attitudinal judgement may stem solely from a factual belief, emotions and past interactions are influential. The authors suggest the possibility that previous research has weakened the influence of past behaviours and the power of 'affect' by placing them under the umbrella of 'cognition' (Zanna & Rempel, 1988). These issues are

taken into account in the development of the proposed conceptual model for this study.

Rationale for proposed model of attitude

The tripartite conceptualisation has a strong historical tradition allowing smooth integration of previous attitude theory and research with the proposed model. This is particularly evident in attitudinal research investigating attitudes toward people with disabilities (Hannah & Pliner, 1983; Shaver, Curtis, Jesunathadas & Strong, 1989). Moreover, by acknowledging both the affective and cognitive components of attitude, this model takes into account the feelings and emotions which influence attitude formation and change. Zanna & Rempel (1988) stress the importance of affect and argue that when an attitude is activated, it generates an emotionally based evaluation and a response with emotional content.

Within this framework, attitudes are viewed as an amalgamation of past conceptualisations of affect, behaviour and cognition which have proven empirical validity. This combines the unitary view of attitude as proposed by Fishbein & Ajzen (1975) who assert that evaluations are based on specific beliefs or cognitions about the attitude object, with the assertion that evaluations are based on affects associated with the attitude object (e.g. Zajonc, 1980) as well as linking attitudes with past behaviours (e.g Bem, 1972). By integrating these three components of attitude the authors purport to have identified a more precise structure of attitude than previously presented (Zanna & Rempel, 1988). In support of such a conceptualisation, a comprehensive review of research into teachers' attitudes toward people with disabilities strongly

suggests the need for research which assesses and compares all three components of attitude (Hannah & Pliner, 1983).

One of the major strengths of the study under discussion is the development and implementation of a range of measures which assess attitudes on a range of levels including, affective (ATDP and IDP: *measures of general and societal attitudes toward people with disabilities*), cognitive (SEIPD: measure of self-efficacy toward future interactions with people with disabilities) and behavioural (MCS: measure of mandatory contact experience with people with disabilities). These measures are discussed in greater depth in Chapter 4.

In conclusion, recent reviews of attitudes and attitude change give strong credence to the tripartite model, noting in particular its distinction between evaluation and affect wherein definitions of affect are restricted to feelings and emotions actually experienced by the subject and evaluation which specifies a cognitive categorisation such as agree/disagree, for/against (Tesser & Shaffer, 1990).

Integration of conceptual model to attitude formation toward people with disabilities

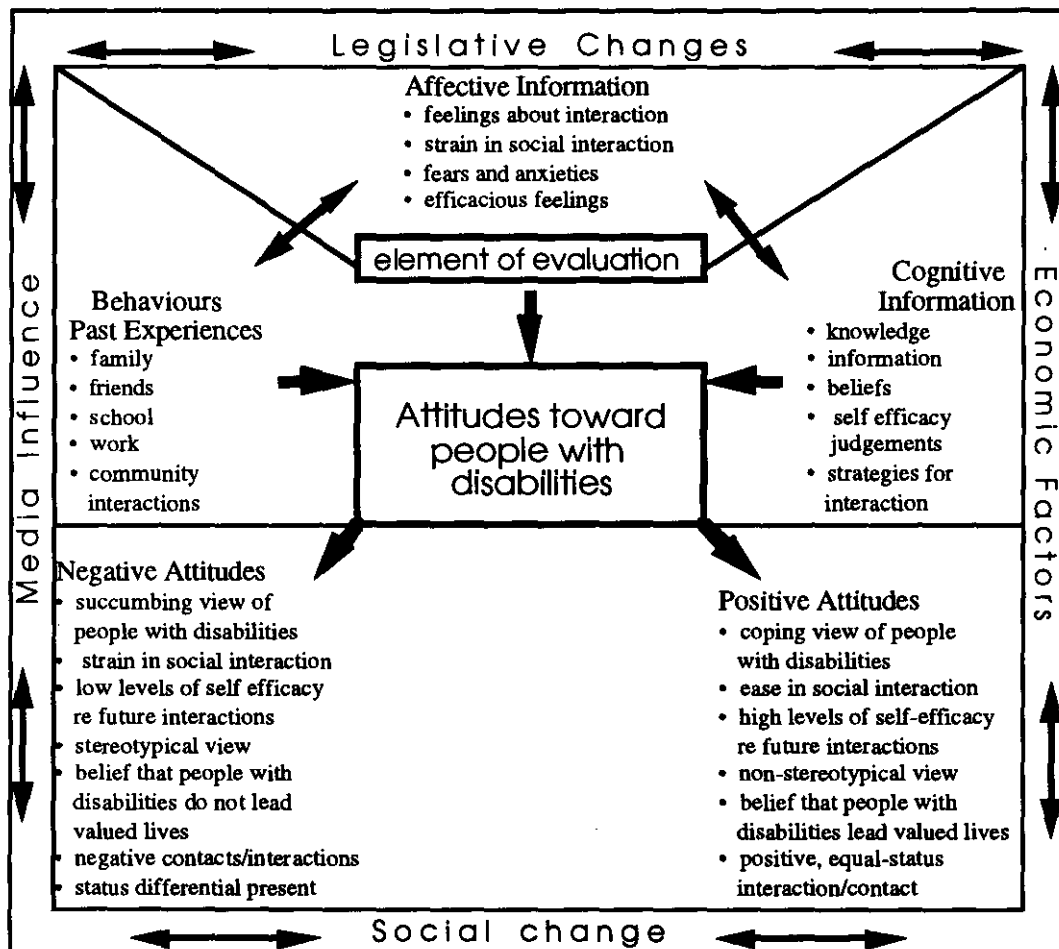
Figure 3.4 shows the conceptual model of formation of attitudes toward people with disabilities used in this study based on Zanna & Rempels' (1988) definition of attitude as outlined in Figure 3.3. Within this model there are three major influences which structure the formation of attitudes: cognitive information, affective information and information based on past experiences/contacts and behaviours.

The specific variables related to the three sources of attitude formation leading to positive or negative attitude formation are based on those highlighted in the review of literature. The model relates directly to Stage 1 of the study, as described in Chapter 1.

Within this model, students' attitudes are influenced by their personal definition, conception or beliefs regarding a person with a disability. This conception is influenced by the students' past experience or contact with people with disabilities which occurs in a variety of contexts including family, friends, school, work or community.

The second influence is that of affective information. Affective information includes fears, feelings and emotions relating to students' conceptions of people with disabilities. Previous research suggests that affect has a strong influence on the development of attitudes toward people with disabilities (e.g. Evans, 1976; Hannah, 1988). This study measures the effect of this influence in two ways. First, the strength of students' self-efficacy towards future interactions with people with disabilities is measured in Stage I, across data collection Phases II and III and in Stage II, as a pre-post-test measure. Secondly, levels of discomfort in social interaction are measured as a dependent variable throughout the three phases of data collection of Stage I of the study and in Stage II as a pre-post-test measure. Qualitative data is also collected in Stage I of the study, isolating students' concerns regarding future interactions with people with disabilities.

Figure 3.4 Proposed Conceptual Model of Attitude Formation



The third influence is that of cognitive information. Previous conceptualisations of attitude have focused solely on this factor, negating the influences of affect and behaviour. Cognitive information includes the knowledge, information or beliefs students' have regarding people with disabilities including their assessments of self-efficacy and strategies for future interactions. Such cognitive information may be gained from sources external to their university course such as media information or informal discussion, thus a sole assessment of the influence of coursework is confounded by a range of variables (Donaldson, 1980). As both the media and the general community reinforce a stereotyped image of people with disabilities,

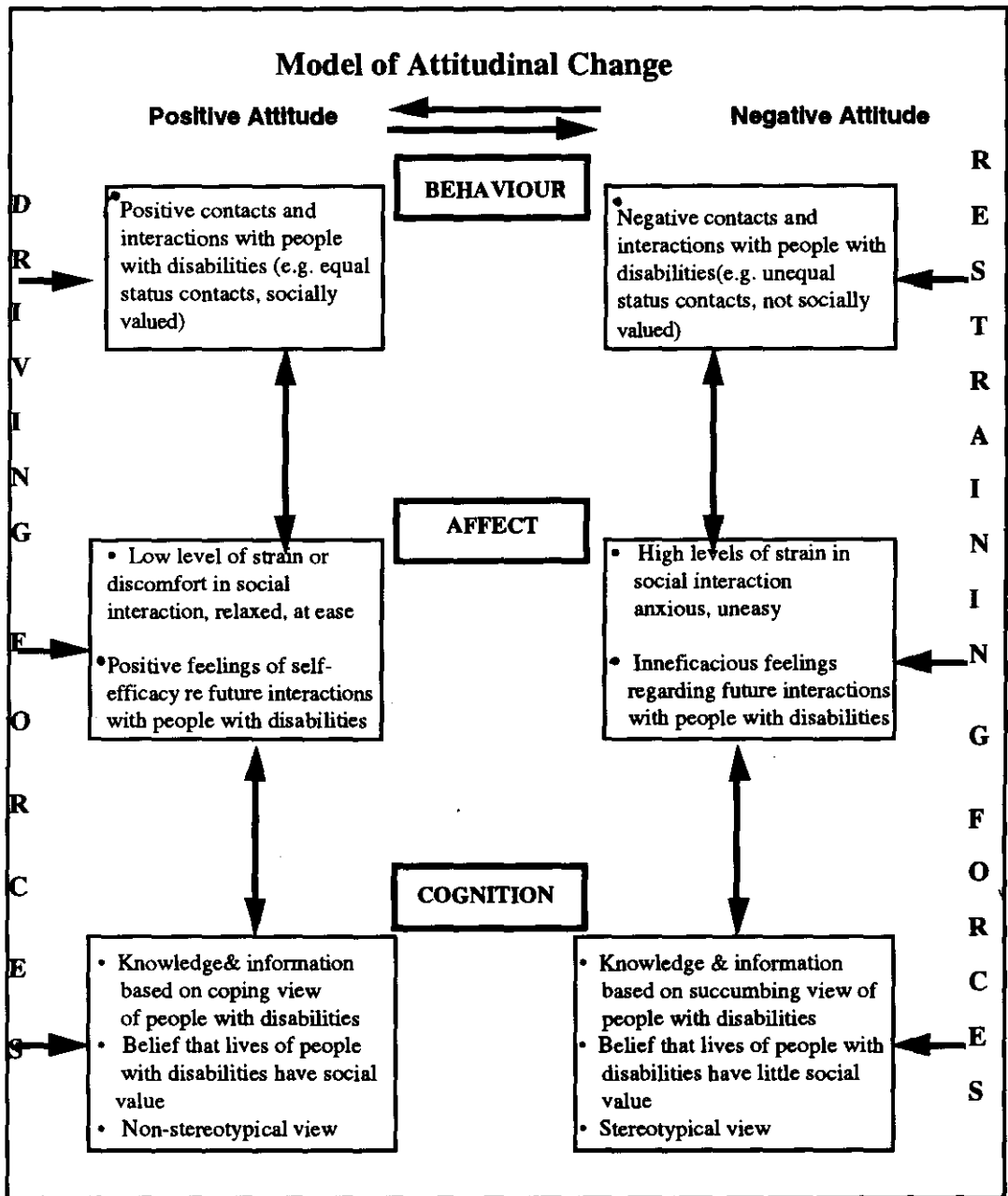
information and experience gained through their university course is crucial to positive attitude formation.

One of the major over-riding influences on attitude formation repeatedly cited in the literature is the type of contact an individual experiences with a person with a disability. In this study the specific contact students' experience as part of their mandatory disability unit is isolated and examined.

Conceptual model of attitude change

The conceptual model of attitude change used in this study (Figure 3.4) is directly related to the model of attitude formation (Figure 3.3) based on Zanna & Rempel's (1988) definition of attitude structure (Figure 3.2). Within this model, the three sources of attitude; behaviour, affective experience and cognitive information include specific information which relate to positive or negative attitudes toward people with disabilities. The stronger of these sources forms the resultant attitude which, when activated, generates an emotionally based evaluation and a response with emotional content (Zanna & Rempel, 1988).

Figure 3.5



Attitude change takes place when a driving force (positive attitude on two or more of the attitude sources) becomes stronger than a negative attitude (restraining force). This conceptualisation of attitude change integrates the model of attitude formation (based on Zanna & Rempel, 1988) with the Lewinian model of attitude change (Lewin, 1949) used in previous research investigating attitudes toward people with disabilities (Evans, 1976; Nicoll, 1988). Recent research literature

suggests that the major variables underlying attitude change include: the expectation that interaction with the target object is about to take place (i.e. people with disabilities) and the provision of information regarding the specific issue (Olson & Zanna, 1993). These factors have been taken into account in the development of the theoretical models of attitude change by taking account of driving forces identified in the literature, as discussed in Chapter 9.

This conceptual model forms the basis for the experimental intervention undertaken in Stage II of the present study.

The following section presents the Hypotheses formulated for Stage I of the study as generated from the literature review.

Hypotheses of the study - Stage I

The following hypotheses have been formulated from the critique of related research and literature as discussed in this chapter. They have been grouped into three discrete areas, including relationships between scales, attitude formation across Stage I and the relationship between contact and resultant attitude toward people with disabilities. A rationale for each group of hypotheses is included at the beginning of each section.

Hypotheses related to attitude scale relationships

As a major focus of the present study is on the development, implementation and validation of a range of attitude measures, including two previously developed scales and two measures constructed by the author for the purposes of the study (see Chapter 4), relationships between measures are of interest. As each scale is purported to measure specific constructs (see Chapter 4) which relate to

attitudes toward people with disabilities it can be hypothesised that particular relationships may exist. The literature related to attitude definition, structure and measurement suggests that there is a need to account for all dimensions of attitude (Abelson, 1982; Ajzen, 1984) and to acknowledge that the cognitive categorisation of an object or event along an evaluative dimension be distinguished from 'affect' which the emotion or feeling has been experienced by the individual (Zanna & Rempel, 1988). In disability-related research there is a need to account for the dimension of affect as previous research has tended to focus on the cognitive dimension alone (Shaver, Curtis, Jesunathadas & Strong, 1989). The present research proposes to evaluate the affective dimension of attitudes toward future interactions with people with disabilities by the development and implementation of a self-efficacy measure based on the work of Albert Bandura (1977a; 1986). Attitude scales developed to measure attitudes toward people with disabilities on a general level (ATDP) and a social level (IDP) are also implemented. Thus, a number of attitude dimensions are measured on a range of levels. An assessment of the relationship between measures is important as it will assist in establishing the constructs they have in common, how they differ and what are the critical variables underlying attitudes. This is of particular importance in regard to recently developed scales and those developed by the author for the purposes of the present study. It is noted that the following hypotheses must be read in light of the discussion of the development and implementation of measurement tools in Chapter 4. Hypotheses related to attitude scale relationships include the following:

Hypothesis 1

There is a negative relationship between the ATDP and the IDP. Students less positive in their general attitude to people with disabilities (lower score on the ATDP) will report higher levels of discomfort in social interaction (higher scores on the IDP).

Hypothesis 2

There is a negative relationship between the SEIPD (high score on the SEIPD) and the ATDP (low score on the ATDP). Students with lower levels of self-efficacy toward future interactions with people with disabilities will be less positive in their general attitudes to people with disabilities.

Hypothesis 3

There is a positive relationship between the SEIPD and the IDP. Students with lower levels of self efficacy toward future interactions with people with disabilities (high score on the SEIPD) will report higher levels of discomfort in social interaction (high score on the IDP).

Hypothesis 4

There is a positive relationship between students who assess their mandatory contact placement as positive (low MCS subscale scores) and general positive attitudes toward people with disabilities (ATDP).

Hypothesis 5

There is a positive relationship between students who assess their mandatory contact placement as positive (low MCS subscale

scores) and lower discomfort in social interaction (low score on the IDP).

Hypothesis 6

There is a positive relationship between students who assess their mandatory contact placement as positive (low MCS subscale scores) and higher levels of self-efficacy (lower score on SEIPD).

Hypotheses testing attitude formation in nursing and teaching students as an outcome of their respective mandatory disability study

Literature related to the formation of nurses' and teachers' attitudes to people with disabilities suggests that there are generic factors which account for attitude, such as the nature of contact (e.g. Lyons, 1991; Paris, 1993) as well as idiosyncratic factors such as teachers' feelings of competence (Stephens & Braun, 1980; Center & Ward, 1987) and nurses' emotional responses to interactions with people with disabilities (Murray & Chambers, 1991; Biordi & Oermann, 1993). Also evident from anecdotal evidence and observation and supported by the literature (e.g. Roden, 1989; Brillhart, Jay & Wyers, 1990) are the concerns expressed by nursing students regarding their interactions with people with disabilities, working in the disability field and general attitude toward people with disabilities.

While level of education is suggested as a possible factor influencing nurses attitudes (e.g. Lillis & Wagner, 1977), the influence of disability specific study has not been widely examined. Overall, the literature suggests that nurses' attitudes toward people with disabilities, irregardless of their level of education, remain negative (e.g. Brillhart, Jay & Wyers, 1990). In regard to teachers, there is strong evidence to

suggest that pre-service special education leads to less resistance to integration (e.g. Thomas, 1987) and the development of positive attitudes (e.g. Westwood, 1984; Eichinger, Rizzo & Sirotnik, 1992).

An identification of these issues led to the formulation of the following two hypotheses related to attitude formation in teaching students. Hypotheses related to nursing students were not developed due to the limited amount of empirical evidence available. However, post-hoc results related to differences in attitude formation between nursing and teaching students will be analysed and discussed.

Hypothesis 7

On completion of the mandatory unit in special education teaching students will become more positive in their general attitude toward people with disabilities (higher score on the ATDP).

Hypothesis 8

On completion of the mandatory unit in special education teaching students will show a decrease in level of discomfort in social interaction (low score on the IDP).

Hypotheses testing the influence of contact with people with disabilities on students' attitudes.

The specific nature of a person's contact with people with disabilities is repeatedly cited throughout the literature as influential in attitude formation and change (Donaldson, 1980; Wright, 1980, 1983), with attitudes of health professionals specifically targeted (Chubon, 1982; Roush & Klockars, 1988; Gething, 1992, 1994a). Thus, an investigation of student's contact with people with disabilities is a major focus of this study.

The proposition of different levels of contact with people with disabilities is becoming evident in the literature with empirical support emerging (e.g. Leonard & Crawford 1989; Altman, 1981). In previous studies (e.g., Leonard & Crawford, 1989) two categories of contact, social and personal, were proposed and examined with findings suggesting that personal contact influences attitudes at a personal level but not a societal level. Another study (Altman, 1981) found three levels of attitude toward people with disabilities; peer group, professionals and the general public. These findings, in conjunction with results of previous research (e.g. Altman, 1981)) present a strong rationale for the development of hypotheses related to the nature and influence of personal versus impersonal or professional contact and consequent attitude formation.

The environment in which contact with people with disabilities takes place is also suggested as influential in attitude formation with schools, places of employment and social settings purported to lead to more positive attitudes than contacts which take place in medical settings or large impersonal institutions (Wright, 1980, 1983; Yunker, 1988).

Further empirical support for these findings and related assertions is necessary, leading to the formulation of the following hypotheses.

Hypothesis 9

Students whose majority interactions with people with disabilities have taken a personal form (i.e. relative, friend) have more positive general attitudes toward people with disabilities (higher score on the ATDP) than students whose majority contact have taken a professional form (pupil, patient).

Hypothesis 10

Students whose majority contact with people with disabilities has been university organised are less positive in their general attitudes toward people with disabilities (lower score on the ATDP) than students with broader majority contacts (university organised versus other)

Hypotheses for Stage II, the experimental intervention, are included in Chapter 9.

Summary and Conclusion

This chapter discusses the structure, definition and theoretical explanations of attitudes with emphasis upon theoretical conceptualisations of attitudes toward people with disabilities. It proposes conceptual models of attitude formation and change which will form the theoretical base for this study. It critiques the literature which identifies specific variables influential in attitude formation and change of nurses and teachers. The importance of the contact variable is identified, particularly equal status contacts. The necessity to examine attitudes of health professionals is consistently cited throughout the literature as it is asserted they may be more negative than the general population.

This discussion of attitude definition, structure and measurement formation and the review of literature related to attitude formation in nurses and teachers lead clearly to the hypotheses of the present study.

The following chapter outlines the methodology underpinning the present research. As the development and validation of measures of attitude toward people with disabilities are a major focus of this study

and are critical to the research design, they are discussed in depth in Chapters 4. In turn, Chapter 5 reports and discusses the psychometric properties of the attitude measures implemented in the present study while Chapter 6 reports and discusses the results of testing of hypotheses related to relationships between measures.

CHAPTER 4: RESEARCH DESIGN AND METHODOLOGY

Introduction

This Chapter describes the methodological procedures used in both the longitudinal study of attitudinal change, Stage I and the short term intervention, Stage II. The methodology is based on the theoretical premise that attitude formation and change are closely linked, and that this relationship must be reflected in the research design. Instrumentation and procedures for collecting data across the two stages of the study are also described. The development and evaluation of two author constructed scales are outlined. Chapter 5 discusses the psychometric properties of these instruments in greater depth.

The methodology used in the study was guided by the specific nature of the research questions. Moreover, the literature suggests that studies of attitude change toward people with disabilities are generally superficial in nature, fail to establish a theoretical base underpinning attitude formation and change and lack a clear definition of the attitude construct (Donaldson, 1980; Shaver, Curtis, Jesunathadas & Strong, 1989; Chubon, 1982, 1992).

The present study aims to redress methodological limitations cited in the literature regarding the measurement of attitude change, in particular:

- i. the limited number of longitudinal studies of attitude formation and change,
- ii. the limited development of theoretical rationales underpinning attitudinal research, and

- iii. the methodological weaknesses including failure to use a control group when experimentally testing attitude change and the use of evaluation tools with doubtful reliability and validity.

As the research design of the present study is complex, a comprehensive model has been included as a reference guide (see Table 4.1). The first stage of this study, Stage I, is a longitudinal investigation into variables which influence nursing and teaching students' attitudes towards people with disabilities, with particular focus on the outcome of the mandatory disability unit. The second stage, Stage II, takes the form of an experimental intervention testing the comparative strength of three models of attitude change in the most negative group of subjects. Overall, the study proposes a strong theoretical link between variables accounting for attitude formation and change (Stage I) and subsequent intervention strategies (Stage II).

Subjects

The subjects chosen for this study were pre-registration nursing students (N=90) enrolled in a Diploma of Health Science (Nursing) and pre-service teaching students (N=90) enrolled in a Diploma of Education (Primary) at The Australian Catholic University, MacKillop Campus, North Sydney. All students were enrolled in courses at the researcher's place of employment.

In NSW, both nursing and teaching students are required to complete mandatory study in the disability/special education area as part of their undergraduate degree. Nursing students complete two semesters of theory and clinical placement in organisations which provide a service to people with disabilities. Teaching students complete a one semester unit in special education. This included a compulsory case study assignment requiring students to have ongoing contact with a student with a disability in an integrated school setting.

Table 4.1

Model of Research Design

<p>STAGE I*</p> <p>Phase I data collection</p> <p>Baseline demographic information and scale scores</p> <p>Nursing students (N=90) Teaching students (N=90)</p> <p>Aims</p> <p>(i) establish the context, form and frequency of contact with people with disabilities prior to the mandatory disability unit,</p> <p>(ii) establish a baseline level of the attitude measures on the ATDP and IDP,</p> <p>(iii) develop and trial the instrument which measures levels of self-efficacy toward interaction with people with disabilities (SEIPD), and</p> <p>(iv) develop and trial an instrument which measures the contact (MCS) component of the mandatory disability units.</p>
<p>Phase II Data collection-post mandatory disability study</p> <p>Nursing students (N=90) Teaching students (N=90)</p> <p>Aims</p> <p>(i) measure students general attitudes toward people with disabilities (ATDP) and level of discomfort in social interaction (IDP).</p> <p>(ii) implement author constructed scales to measure level of self-efficacy regarding future interactions with people with disabilities (SEIPD) and rating of mandatory contact experience (MCS).</p> <p>(iii) collect qualitative data on students' major concerns regarding future interactions with people with disabilities.</p> <p>(iv) collect data on students' contact with people with disabilities as part of the mandatory disability unit including; frequency, form, context and disability type.</p>
<p>Phase III Data collection</p> <p>Longitudinal measures of attitude toward people with disabilities</p> <p>Nursing students (N=89) Teaching students (N=87)</p> <p>Aims</p> <p>(i) measure students' attitudes on ATDP, IDP, SEIPD and MCS to establish longevity across phases of data collection and to establish similarities and differences between nursing and teaching students.</p> <p>(ii) collect and examine data on students' interest in future career and study choices</p>
<p>Analyses of data undertaken after Phase III data collection</p> <p>(i) testing of Hypotheses 1-6 predicting relationships between measures</p> <p>(i) testing of Hypotheses 7 & 8 predicting movement towards more positive attitudes and lower level of discomfort in social interaction toward people with disabilities in teaching students</p> <p>(ii) testing of Hypotheses 9& 10 predicting a relationship between student attitudes and nature of contact.</p>

Table 4.3 Model of Research Design (continued)

- (iii) analysis of post-hoc findings of changes in students' attitudes toward people with disabilities with focus on similarities and differences of nursing and teaching students.
- (iv) analysis of the relationship between students' attitudes toward people with disabilities and future career and study choices.
- (v) establishing the influence of self-efficacy on attitude formation to give a rationale for inclusion of this model in Stage II experimental intervention.
- (vi) establishing the most negative population of students to become the sample population in Stage II.

STAGE II
Experimental Intervention
Phase IV data collection

Aims

- (i) to undertake an intervention study with the sub-population of students found to hold the most negative attitudes toward people with disabilities in Stage I of the study
- (ii) to test the most effective methodology for predicting attitude change across a range of measures including the ATDP, the IDP and the SEIPD
- (iii) to test **Hypotheses 11-15** predicting relationships between specific models of intervention and attitude change

Pre test-Post test scores on the ATDP, IDP and SEIPD were collected and analysed
 The intervention study was made up of the following groups:

Treatment group 1-Media + discussion

Treatment group 2-Media+ discussion + contact with equal status peer with a disability

Treatment group 3-Self-efficacy training re future interactions with people with disabilities

Control group No treatment

* Phases I-III of data collection correspond to years 1-III of students' study respectively

Teaching students are also likely to interact with students with disabilities as part of their general practicum experience.

Subjects were chosen randomly from a total of 260 students (140 nursing, 120 teaching). A complete list of names of the one hundred and eighty students was kept so they could be followed through the two stages of the study. Names were not matched with the results of the data collection allowing respondents to remain anonymous throughout the study.

Informed consent was obtained by explaining the nature of the study to the subjects, the procedures to be administered and the use to which the results would be put. For Stage I of the study, students were given the research questions, a sample questionnaire, measurement tools and an indication of the time it would take to complete these. They were also given information regarding where the results would be used, for example, curriculum design and planning and policy design. Students who wished to participate in Stage I were asked to sign a written consent form (Appendix 4.1).

For Stage II, Phase IV, the experimental study, students were given a similar explanation that they were part of an experiment to test the most effective theoretical model for attitude change toward people with disabilities. They were not given information as to which specific treatment group they were to participate in. Written consent was obtained using a form similar to that used for Stage I (Appendix 4.2).

The relationship between the two groups of students, and the researcher, were similar in that both groups had been taught by the researcher as part of a team, but had not had close or personal contact.

Instrumentation

Two previously constructed and validated measures of attitudes toward people with disabilities were employed in this study. The first is the most commonly used international measure of attitude toward people with disabilities, the Attitudes Toward Disabled Persons Scale, ATDP (Yuker, Block & Young, 1970). The literature suggests that as a sole measure of attitude is difficult to validate, a variety of attitudinal measures should be implemented (Siller, 1984; Leyser, Cumblad & Strickman, 1986). Taking this into consideration, a measure of attitudes toward people with disabilities developed in Australia, The

Interaction with Disabled Persons Scale, IDP (Gething, 1991a) was also employed, along with two instruments developed by the author for the specific purposes of this study.

Attitude Toward Disabled Persons Scale (ATDP)

Because of its wide usage in comparative local and international studies, the ATDP Form O (Appendix 4.3) is used as a measure of attitude across Stage I of the study and as a pre-post test measure in Stage II. Reviews of related research suggest that the majority of studies on attitudes toward people with disabilities use this scale which is based on the principles of measurement theory (Yuker & Block, 1986; Chubon, 1982, 1992). It is further reported that the ATDP is widely used, and accepted internationally, as the instrument of choice for measuring attitudes toward people with disabilities (Roush & Klockars, 1988) with further assertions that it is the best known and most widely used scale purporting to measure attitudes toward people with disabilities (Antonak & Livneh, 1988).

In contrast to other instruments designed to measure attitudes within a particular study, this tool was designed to be used across a wide range of settings. In the development of this measure psychometric properties such as item discrimination and response tendency, ignored by previous researchers, were addressed (Antonak, 1981; Antonak & Livneh, 1988).

The ATDP, (Yuker, Block & Young, 1970) was originally designed to measure attitudes of college students. The conceptual belief on which the measure is based is that some persons perceive people with disabilities in a stereotypic manner as both 'different from' and 'inferior to' people without disabilities (Yuker & Block, 1986). The extent of this belief is measured by this scale.

The structure of the ATDP is of a Likert-type scale with six rating categories ranging from 'I agree very much' to 'I disagree very much' with no neutral point. There are three versions of the scale, with Form O, consisting of twenty items, most widely used. The measure has two subscales: treatment and characteristics. The first contains items which relate to the treatment of people with disabilities in education and employment. The second contains items related to specific characteristics about people with disabilities. For both subscales and the overall scale, a higher score indicates a more positive or accepting attitude or lower perceived differences between people with and without a disability.

Although the ATDP is the most widely used scale in related attitude research, problems with its implementation are documented in the literature. It is suggested that although the ATDP has valid psychometric qualities, its greatest downfall is its single summative score and unidimensional character (Leyser, Cumblad & Strickman, 1986). This is problematic in that single score measures are likely to only tap a mixture of dimensions on an affective level (Leyser, Cumblad & Strickman, 1986). An Australian study notes possible difficulties in administration and scoring of the ATDP when respondents, unwilling to make generalisations about people with disabilities, omit questions or express hostility toward specific questions (Leonard & Crawford, 1989). On the other hand, a quantitative study supports the use of the ATDP as a unitary measure of attitudes toward people with disabilities (Matkin, Hafer, Wright and Lutzker, 1983).

The majority of studies using this scale to investigate attitudes toward people with disabilities, focus on changing attitudes under

specific circumstances rather than looking at experiential variables which may have influenced the attitude initially (Yuker & Block, 1986).

The ATDP continues to be the most widely used measure of attitude toward people with disabilities in both Australian and international studies. Its most common usage is as a pre and post-test measure of attitudinal change. It has been included in this study to allow for ease of comparison with other research and to enable replication of procedures.

Interaction with Disabled Persons Scale (IDP)

The Interaction with Disabled Persons Scale (IDP) (Appendix 4.4) is a measurement tool developed in Australia (Gething, 1991a). This scale has been designed to measure personal reactions to interactions with people with disabilities (see Table 4.2). Attitudes are operationalised in terms of level of discomfort in social interaction reported by a person during interaction with people with disabilities (Gething & Wheeler, 1992). Gething (1991a) reports results of factor analyses suggesting that fifteen items cluster to form a single factor related to discomfort in social interaction, accounting for 51% of the variance. The IDP scale consists of 20 items requiring respondents to indicate their level of agreement or disagreement with each item on a six point scale with no neutral point (Gething 1991a). A lower score on the scale indicates less discomfort in social interaction, a higher score indicates greater discomfort (see Table 4.2).

Reliability was assessed using both test-retest and internal consistency measures. Results of test-retest reliability indicate relatively high levels of reliability comparable to other attitude

measures with reliability coefficients ranging from +.82 to +.51 (Gething, 1991a)

The author reports that six factor clusters emerged consistently over a variety of samples which is asserted as sufficient to warrant interpretation of the IDP as measuring six dimensions related to discomfort in social interaction (Gething 1991a). The largest factors include; discomfort in social interaction, coping versus succumbing framework, perceived level of information and vulnerability.

Instruments developed for this study

Two measurement tools were developed by the author for the purpose of this study, to measure variables thought worthy of closer examination. The first is the Self-Efficacy Toward Future Interactions with People with Disabilities Scale, SEIPD (Teaching students Appendix 4.5, Nursing students, Appendix 4.6), a measure of self-efficacy toward future interactions with people with disabilities. The second, the Mandatory Contact Scale, MCS (Teaching students Appendix 4.7, Nursing students Appendix 4.8), a measure of students' assessment of the contact component of the mandatory disability unit.

Questionnaires including both closed and open ended questions were also developed and administered in Stage I of the study to collect both demographic and qualitative data.

Table 4.2
Operational Definitions and Rating of Attitude Measures

Measure	Operational Definition	Rating
ATDP Attitude Toward Disabled Persons Scale	The ATDP measures attitudes toward people with disabilities based on the assumption that some persons perceive people with disabilities in a stereotypic manner, as 'different from' and 'inferior to' people without disabilities. (Yuker, Block and Youngg 1986). The ATDP is purported to measure general attitudes.	Low score = less positive attitudes toward people with disabilities. High score = more positive attitudes toward people with disabilities.
IDP Interaction with Disabled Persons Scale	The IDP scale measures attitude in terms of level of discomfort reported by a person. The IDP is purported to measure attitudes on a social level (Gething, 1991a).	Low score = less strain in social interaction. High score = greater strain in social interaction.
SEIPD Self-efficacy toward interactions with people with disabilities.	Efficacious or inefficacious feelings toward future interactions with people with disabilities. The SEIPD is purported to measure attitudes on a professional level.	Low score = strong self-efficacy toward future interactions with people with disabilities. High score = low self-efficacy toward future interactions with people with disabilities.

The development and implementation of these author constructed instruments is a significant feature of this study. An analysis of their psychometric properties is reported in Chapter 5. Each measure and the questionnaires are discussed in detail in the following section.

Self-Efficacy Toward Interactions with People With Disabilities Scale (SEIPD)

Development of the SEIPD

It was hypothesised in this study that students' perceived self-efficacy regarding professional interactions with people with disabilities constitutes a significant mediating variable influencing resultant attitudes and discomfort in social interaction. It is further hypothesised that self-efficacy training is an effective model of bringing about positive attitude change.

The self-efficacy scale SEIPD was developed from both data gathered in Phase 1 of the study and data gathered from previous groups of nursing and teaching students. These data related to students':

- i. self-beliefs of success in their interaction with people with disabilities, and
- ii. statements regarding their feelings about future interactions with people with disabilities.

From this qualitative data a set of 20 questions was developed and trialled with a group of 60 students undertaking similar university courses to those in the subject population, but not involved in this study. From the original 20 items 15 were chosen to form the scale. Items were written to measure self-efficacy beliefs regarding future interactions with people with disabilities. These items focused on three areas highlighted in the literature regarding self-efficacy scale development (Scherer, Maddux, Mercandante, Prentice-Dunn, Jacobs & Rogers, 1982) and included:

- i. willingness to initiate behaviour,

- ii. willingness to expend effort in completing the behaviour, and
- iii. persistence in the face of adversity or difficult situations.

The SEIPD consists of a Likert type 8-point scale ranging from definitely false (1) to definitely true (8) with no mid-point. 10 items are phrased positively and 5 negatively. An example of one of the scale items is the following: 'I am able to plan and organise appropriate activities for my clients/students'.

Although it is acknowledged that there is no substantial literature examining relative merits of Likert-type scale item construction weighting and selection (Thomas & Petersen, 1982), it is asserted that summated rating scales have less leniency error and higher reliability than alternate formats (Kinicki, Bannister, Hom & Denisi, 1985). An 8 point format was chosen as the literature suggests that inclusion of a neutral point may result in regression to the mean (Pedhazur Schmelkin, 1991; Spector, 1992).

In this study self-efficacy is operationalised as the efficacious or inefficacious feelings toward future interactions with people with disabilities (see Table 4.2). These interactions take a professional form e.g. 'I am able to plan and organise appropriate activities for my students/clients', 'I can adapt practices to suit individual needs' Thus, the SEIPD taps attitudes toward interactions which are of a professional nature. A number of hypotheses related to this assertion are formulated and tested.

The importance of including a range of measures which tap the specific dimensions of attitude is consistently suggested in critiques of previous research into attitudes toward people with disabilities (Shaver, Curtis, Jesunathadas & Strong, 1989; Chubon, 1982, 1992).

Thus, inclusion of the SEIPD, which purports to tap attitudes at a professional level, in addition to the previously constructed measures which tap attitudes at a general (ATDP) and social (IDP) level (see Table 4.2), is a major strength of this study. The idiosyncratic nature of professional interaction with people with disabilities and resultant attitude formation is identified in the literature (Altman, 1981; Wright, 1988) yet there have been few previous attempts to measure its effect.

Implementation of the SEIPD

The SEIPD was administered in data collection Phase II of the study after subjects' had completed the mandatory disability unit, and again in data collection Phase III, to test the longitudinal nature of self-efficacy beliefs (Table 4.3 outlines measurement tools administered in each phase of the study). It was also used in Phase VI as a pre-post test measure along with the attitude measures ATDP and IDP (see Table 4.3).

Reliability and validity of the SEIPD

In relation to the reliability and validity of the SEIPD, the following statistical procedures were implemented. Psychometric properties of all measures used in the study are discussed in depth in Chapter 5. A summary is included as follows:

- i. Reliability of the SEIPD was evaluated using both coefficient alpha and test-retest reliability coefficients across a number of samples. Internal consistency was assessed in Phase of the study with the entire sample (N=180) using Co-efficient Alpha reliability estimate (1951). An mean Alpha coefficient of .85 was established. The reliability coefficient across a four week period was +.80 and across a six month period, +.68.

- i. Factorial validity of the SEIPD was investigated by principal component analysis. Both orthogonal and oblique rotation gave identical results with only one factor extracted accounting for 47.5% to 64.1% (M=55.1%) of the variance.
- iii. Criterion related validity was evaluated by correlating the SEIPD scores with measures assessing similar constructs as reported in Chapter 5.

Table 4.3

Measurement tools used across Stages I & II of the study

Phases of data collection	Measures used
STAGE I	
data collection phase I (year one of students' study) Demographic information and baseline of prior contact Baseline attitude measures	Questionnaire ATDP IDP
data collection phase II (year two of students' study) Qualitative data-major concerns re interaction with people with disabilities Mandatory Contact Scale Self-Efficacy Toward Future Interactions with People with Disabilities Attitude Toward Disabled Persons Interaction with Disabled Persons	Questionnaire MCS SEIPD ATDP IDP
data collection phase III (year three of students' study) Data on future career and study choices Mandatory Contact Scale Self-Efficacy Toward Future Interactions with People with Disabilities Attitude Toward Disabled Persons Interaction with Disabled Persons	Questionnaire MCS SEIPD ATDP IDP
STAGE II	
data collection phase IV Pre test-Post tests of: Self-Efficacy Toward Future Interactions with People with Disabilities Attitude Toward Disabled Persons Interaction with Disabled Persons	SEIPD ATDP IDP

Mandatory Contact Scale (MCS)

Development of the MCS

Contact with people with disabilities undertaken as part of the mandatory disability unit was investigated using a measure developed and trialled during Phase I of the study. Contact with people with disabilities is identified in research literature as a variable worthy of further investigation (Donaldson, 1980; Wright, 1980, 1988; Chubon, 1982, 1992). Although frequency of contact is the most frequently cited independent variable in studies of attitude change toward people with disabilities, few studies agree on the nature of contact or offer a clear definition of contact (Altman, 1981). It is further suggested that a well structured contact scale incorporating factors such as occurrence or non- occurrence of contact, nature of contact (e.g. with family, friends), duration and context is necessary to define the effects of this important variable (Altman, 1981).

For teaching students, the contact component of the mandatory special education unit was homogenous in terms of its environment, an integrated primary school setting. Nursing students had a more heterogenous experience ranging across a variety of environments, including institutions, hospitals, community day placements and special schools.

To contextualise the variety of contact experienced by nursing students they were asked to name the placement they remembered most clearly, specify the number of days spent in this environment, and the age and type of disability of the people with disabilities.

Items in the MCS scale (see Appendices 4.7 and 4.8) were developed from a variety of sources. Both intrinsic and extrinsic factors related to

students' contact with people with disabilities were taken into account. Extrinsic factors include the preparation and support given to respondents prior to and during the practicum, such as pre-requisite knowledge and information, skill development, expectation and support from university and placement staff. Intrinsic factors included respondents' ability to overcome their fears about interaction and their personal view of people with disabilities in terms of a succumbing or coping framework (Wright, 1980, 1988 see Chapter 3).

A further source of items came from a series of statements made by previous year nursing and teaching students regarding their placements. The original questionnaire included 30 questions which were developed from these answers and trialled with 60 students not involved in the study. After initial data analysis, 6 items were deleted due to ambiguity, leaving 24 questions in the scale.

Reliability and validity of the MCS

A number of initial tests of reliability and validity were undertaken with the MCS including the following:

- i. Reliability of the MCS subscales were evaluated using both coefficient alpha and test-retest reliability coefficients across a variety of samples. For example, the reliability coefficient across a four week period was $+0.82$ and across a six month period, $+0.68$. Internal consistency was assessed using Cronbachs Coefficient Alpha with a mean Alpha coefficient of $.88$ established for the four subscales.
- ii. The unidimensionality of MCS subscales was supported by a principal component analysis on the items in each subscale incorporating both orthogonal and oblique rotation. This analysis gave identical results with one major factor extracted.

Correlations among the 4 subscales in the MCS were consistently strong, particularly between the subscales Experience, Environment and Interaction, as expected (.81-.87 see Chapter 5). The subscale Support was moderately correlated with subscales Experience, Environment and Interaction (.51-.66).

- iii. Confirmatory factor analysis was undertaken to examine and establish the structure of the four subscales in the MCS using LISREL (version 8, 1993). Goodness of fit index was .88 and the Tucker Lewis index .94, indicating a moderately good fit of the model specification.

Collection of demographic and qualitative data

In addition to the implementation of the attitude and contact measures, questionnaires were administered across Stage I, data collection Phases I-III (see Table 4.3). The aim of this procedure was to collect both qualitative and demographic data specific to students' experiences with people with disabilities including both university organised and alternate contact with people with disabilities. Information regarding future career and study choices was also collected in Phase III data collection.

In Phase I, data on prior contact with people with disabilities were collected using a simple questionnaire (Appendix 4.9). Further data was collected in Phase II and III of the data collection through administration of a questionnaire investigating ongoing contact with people with disabilities, contact specific to the mandatory disability unit, and interest in working and undertaking post-graduate study in the disability area (see Appendices 4.10 and 4.11 and Appendices 4.12 and 4.13 for data collection Phases II and III respectively). Both closed

and open-ended responses exploring any increase or decrease in frequency, actual frequency, age range, type of disability and feelings regarding contact with people with disabilities were included. Although questionnaires for both nursing and teaching students included similar questions they differed in terminology specific to each group. For example, incorporation of the term 'client' for nursing students and 'student' for teaching students when describing professional interactions with people with disabilities.

Analysis of qualitative data

Demographic data and closed questions were analysed by using non parametric statistics. Qualitative data was coded using content analysis by dividing responses to open-ended questions into meaningful and reputable coding units that could be reliably assigned to specific categories (Miles & Huberman, 1984; Lincoln & Guba, 1985). The coding units took the form of themes or categories which were defined as any group of sentences, one sentence or word/s which conveyed a single similar idea. Three researchers familiar with the subject material undertook a process of triangulation to ensure the validity of the content analysis. Triangulation refers to an examination of the categories and responses by a second or third reviewer to ensure the responses were logically determined, representative of the data, mutually exclusive and clearly defined (Patton, 1980; Bailey, 1991).

Thus, data related to subjects' contact with people with disabilities were collected in a variety of ways across Stage I of the study. Further the SEIPD, and the MCS, in conjunction with the ATDP and IDP, were used to collect data related to students' attitudes towards people with disabilities.

Procedures and Method

In all phases of the study subjects were administered all measurement tools in tutorial groups of 20-28 members with the permission of their lecturers. All measures were administered by three lecturers, familiar with the subject material, who were required to follow similar guidelines such as providing instructions, giving oral examples and reading items as examples. Any possible problems with student/lecturer relationships were overcome by rotating the three lecturers between both known and unknown groups.

In Stage II, one lecturer worked with the three experimental and the control group to ensure that personal bias did not influence results. In addition, subjects were assured that all information regarding the purpose of the study and personal responses would be treated in confidence and remain anonymous.

The following section describes the procedures and method undertaken across each phase of the study. As the research design and subsequent data collection is complex, a flow chart has been developed to enable the reader to graphically view the overall research design (see Table 4.1).

Stage I (Phases I-III of data collection)

In Stage I of this study, data related to variables influencing attitude change were collected over a three year period. The methodology used is ex post-facto which describes characteristics and events connected with a sample with no manipulation of variables. In this sense the variables occur in the natural setting under study with the researcher attempting to determine the relationships occurring between them (Bailey, 1991). In some instances hypotheses testing was undertaken when hypotheses were generated from both the literature and results

of previous studies. In others post hoc results were identified and discussed.

Data collection phase I

Aims

The major aims of this phase were to:

- i. establish the context, form and frequency of contact with people with disabilities prior to the mandatory disability unit,
- ii. establish a baseline level of the attitude measures on the ATDP and IDP,
- iii. investigate students' discomfort in social interaction in future interactions with people with disabilities,
- iv. develop and trial the instrument which measures levels of self-efficacy toward interaction with people with disabilities (SEIPD), and
- v. develop and trial an instrument which measures the contact (MCS) component of the mandatory disability units.

Method

This phase establishes a baseline of attitude toward people with disabilities in the population under investigation (N=180: 90 nursing students, 90 teaching students) within the initial stage of their University education. It also investigates the level of contact with people with disabilities giving a baseline of prior contact. Demographic data were collected along with data related to the contact variable including: frequency of contact with people with disabilities, form of the contact, context of the interaction (e.g. relative, friend, workmate,

person in the community, school environment, work environment), and the environment wherein the interactions took place. The ATDP and IDP scales were administered to respondents to establish a baseline score on these attitude measures.

Qualitative data were also collected regarding subject's self-description of the level of success and perceived self-efficacy regarding his/her interactions with people with disabilities. This data were coded and used to develop the Self-Efficacy Toward Interactions With People With Disabilities Scale (SEIPD) administered across all phases of data collection in both Stage I and II of the study. Phase I data was collected in March/April 1989, one month after enrolment.

Data collection phase II

Aims

- (i) measure students general attitudes toward people with disabilities (ATDP) and level of discomfort in social interaction (IDP).
- (ii) implement author constructed scales to measure level of self-efficacy regarding future interactions with people with disabilities (SEIPD) and rating of mandatory contact experience (MCS).
- (iii) collect qualitative data on students' major concerns regarding future interactions with people with disabilities.
- (iv) collect data on students' contact with people with disabilities as part of the mandatory disability unit including; frequency, form, context and disability type.

Method

This phase of data collection was undertaken in October 1990, in the students' second year at University on completion of the mandatory disability unit, in order to conduct hypotheses testing and analyses of

post-hoc results. For both nursing and teaching students the mandatory disability unit included a compulsory practicum experience leading to more intensive interactions with people with disabilities. Teaching students had also completed two general practicums in primary schools in which they had significant interactions with students with disabilities in an integrated school setting. An outline of these mandatory units appears in Appendices 4.13 and 4.14.

The MCS, a measurement tool designed to investigate this mandatory contact with people with disabilities, was administered. As discussed in the section on measurement, the aim of this tool is to investigate the contact variable in more depth, looking at specific types of contact which may have a stronger influence upon the subsequent attitude and/or level of discomfort in social interaction. Further, the SEIPD, a measure of self efficacy toward future interactions with people with disabilities was administered along with the ATDP, a measure of general attitude and the IDP, a measure of discomfort in social interaction. A questionnaire collecting information specific to each students' contact experience was also administered.

Data collection phase III

Aims

- (i) measure students' attitudes on ATDP, IDP, SEIPD and MCS to establish longevity across phases of data collection and to establish similarities and differences between nursing and teaching students.
- (ii) collect and examine data on students' interest in future career and study choices

- (iii) establish any relationship between the construct of self-efficacy and attitude formation toward people with disabilities.

The major aims of Phase III were to measure longevity of attitude change on the ATDP and IDP and note changes in both contact with people with disabilities and level of self-efficacy. Students' interest in working or undertaking post-graduate study in the disability field was also investigated.

Method

This involved administration of a questionnaire focusing on continuing contact with people with disabilities and future career and study choices, and the four measurement tools as for Phase II data collection (see Table 4.1). Data in Phase III was collected in September/October 1991 during the third and final year of the students' university course. On completion of the Phase II data collection an analyses of all data was undertaken to test Hypotheses 1-10. Further post-hoc analyses were undertaken on attitude formation and students' future career and study choices. All of these procedures are represented in Table 4.1.

Stage II : Experimental intervention

Data collection phase IV

Stage II of the present study is closely linked to Stage I in that it aims to test the most a range model of models of attitude change toward people with disabilities with the sub-population of students found to be most negative across Stage I. It also builds on findings of Stage I related to the construct of self-efficacy by implementing self-efficacy training as one intervention model.

Aims

- (i) to undertake an intervention study with the sub-population of students found to hold the most negative attitudes toward people with disabilities in Stage I of the study
- (ii) to test the most effective methodology for predicting attitude change across a range of measures including the ATDP, the IDP and the SEIPD
- (iii) to test Hypotheses 11-15 predicting relationships between specific models of intervention and attitude change

The experimental intervention was undertaken with students who had been found to have more negative attitudes toward people with disabilities in Stage I of the study. Three models of attitudinal change were tested for their relative effects employing a pre-test post-test design. A control group who received no treatment was also included in the study. The three models of proposed attitude change were as follows:

- i. Treatment one aimed to enhance positive attitudes towards people with disabilities through the information, media and discussion,
- ii. Treatment two aimed to enhance knowledge using the previous model with the inclusion use of contact with a similar age, equal status peer with a disability,
- iii. The third model was an intervention which incorporating self efficacy training based on the work of Albert Bandura (1977a, 1986).

Method

The interventions were conducted over a three week period for three hours per week in October/November, 1991. Pre and post test data relating to attitudes as measured by the ADP and DIP and level of self-efficacy toward future interactions as measured by the SEEPED were collected and analysed. Results of this intervention study are reported and discussed in depth in Chapter 9.

Data analysis

Data were analysed using both descriptive and inferential statistical measures available on SPSS-X. Analysis of qualitative data has been described previously.

Summary

This Chapter discusses the subjects, instrumentation and procedures used in the study. It gives particular attention to the development of the two measures of attitudes constructed by the present author. It outlines the method, procedures, instrumentation and aims of each Stage of the study and identifies the links between Stages I and I.

The following chapter reports and discusses the psychometric properties of the measurement tools, with particular focus on those developed by the author for the purposes of the study.

CHAPTER 5: PSYCHOMETRIC PROPERTIES OF INSTRUMENTS

Introduction

This Chapter aims to establish initial construct validity of the author constructed measures implemented in the study. It also reports psychometric properties of the two previously constructed measures: the Attitude Toward Disabled Persons Scale (ATDP) developed in the USA and the Interaction With Disabled People Scale (IDP), an Australian measure of discomfort in social interaction with people with disabilities.

As reported below, the two measures, constructed by the author for the purposes of the study (Self-Efficacy Toward Interactions with People with Disabilities Scale, SEIPD, and the Mandatory Contact Scale, MCS) were found to have relatively high and satisfactory reliability and initial validity. The process of establishing the reliability and validity of these scales is a critical pre-requisite to the following chapters which report and discuss the testing of the various hypotheses of the study. Although two well-established scales were employed in this study, idiosyncratic features of the contact component of the mandatory disability unit and the nature of fears and concerns expressed by students regarding future interactions with people with disabilities, necessitated an investigation of attitude beyond the scope of the ATDP and IDP. For this reason the author developed two tools, the Mandatory Contact Scale (MCS) and the Self-Efficacy Toward Interaction With People with Disabilities (SEIPD) as discussed in Chapter 4. The administration of these four measures strengthens the study, as the inclusion of a range of attitude measures is suggested in related literature (Shaver, Curtis, Jesunathadas & Strong, 1989).

As this study aims to examine changes in attitudes toward people with disabilities across a range of measures, the construct validity of each scale is important. The SEIPD and the MCS, developed by the author for the purposes of this study, do not have similar established construct validity as the ATDP and the IDP. For this reason the construct validity of the author constructed scales is discussed in depth in this chapter. Roush & Klockars (1988), in a report on construct validation of scales measuring attitudes toward people with disabilities suggest three pre-requisites to the evaluation of construct validity;

- i. reliability as a necessary pre-requisite for validity,
- ii. factor analysis of scales to determine underlying dimensions, and
- iii. consistency of the scale with the nomological network that defines attitudes toward people with disabilities.

Both reliability and factor analysis were undertaken and are discussed in this chapter. Initial analysis of the consistency of the SEIPD within its specific nomological network was also undertaken. Similar analysis was not undertaken with the MCS as a complementary nomological network does not exist due to the specific focus of the measure. It is acknowledged that in the development stages of a new scale this latter process will be ongoing, with the process of construct validation taking place across a number of years.

Attitudes Toward Disabled Persons Scale (ATDP) and Interaction With Disabled Persons Scale (IDP)

The instruments ATDP and IDP were developed by Yuker, Block & Youngg (1976) and Gething (1991a) respectively, as discussed in Chapter 4. The ATDP is widely used in Australian and overseas studies of attitude towards people with disabilities (e.g. Antonak, 1981; Leyser, Cumblad & Strickman, 1986). The IDP has been used in local and overseas studies (e.g. Leonard & Crawford, 1989; Gething, 1992, 1994a). Both instruments' reliabilities were generally found to be relatively high and satisfactory. For the IDP (Gething 1991a) reliability was reported to be in the range of .51 to .82, whereas for the ATDP, this ranged from .68 to .84 (Yuker & Block, 1986).

Mandatory Contact Scale (MCS)

As contact is purported to be an influential variable in attitude formation toward people with disabilities (Wright, 1980, 1988; Livneh, 1988) a tool, the Mandatory Contact Scale MCS, was developed to assess the effect of the contact component of the mandatory disability unit upon students' attitudes toward people with disabilities. This scale is made up of four subscales: Experience, Support, Environment, and Interaction. Each of the subscales contain six items. The development of this scale has been discussed in Chapter 4.

It was expected that there would be a strong correlation between the subscales, Experience, Environment and Interaction because although they measure discrete experiences, they have a common focus on students' feelings regarding personal interactions or environmental influences on practicum. The Support subscale was not expected to be

as strongly correlated as its focus is upon factors external to the environment such as support given by university staff and the contribution of preparatory information.

Reliabilities of the MCS

Reliability of the MCS was tested through an examination of both internal consistency and test-retest reliability.

Internal consistency

The internal consistency of each subscale as measured by Cronbach's alpha were calculated for data collected in Phase II and III separately. As can be seen in Table 5.1, the reliabilities of the four subscales ranged from .73 to .93 with a mean of .88. As there were only six items in each subscale, the relatively high reliabilities supported that the items within each subscale were relatively homogeneous.

Test-retest reliability of the MCS

Test-retest reliability of the MCS scale was established by administering the scale to the same group of respondents initially and across a specific time interval. Care was taken to control factors which may bias effects such as the length of time between administration and environmental factors. Table 5.2 shows that MCS scale has a consistently high level of reliability with correlation coefficients ranging from +.68 to +.82. These findings are compatible with similar attitude measures.

Table 5.1**Reliabilities of Mandatory Contact Subscales****Reliabilities**

Measures	Number of Items	Phase II	Phase III
Mandatory Contact Scale			
Subscales:			
Experience	6	.93	.94
Support	6	.85	.73
Environment	6	.88	.88
Interaction	6	.91	.91

Table 5.2**Test-retest reliability of the MCS Scale**

Sample Group	Time Interval	Sample Size	Reliability Co-efficient
Nursing Students 1990	4 weeks	110	+.82
Teaching Students 1990	2 months	96	+.80
Habilitation Students 1990	6 months	45	+.68
Habilitation Students 1991	6 weeks	60	+.77

Factor analyses of the MCS

The correlations among the items in each of the four subscales for data collection Phases II and III are shown in Appendix 5.1. It can be seen that most of the items within the same subscale were significantly and highly correlated.

If the items within each subscale are homogeneous, it is expected that a factor analysis of these items should produce one major factor per scale. For the Mandatory Contact Scale, the unidimensionality of each subscale was supported by a principal components analysis on the items in each subscale. The eigenvalue greater than one criterion or the scree test generally revealed a one factor solution for each subscale. Both orthogonal and oblique rotation gave identical results because only one factor was extracted. As can be seen from Table 5.3, this largest factor accounted for 45.9 % to 77.5% (M = 65.8%) of the total variance of each subscale. These results showed that the items within each subscale were reasonably uni-dimensional and were measuring the same construct.

Table 5.3

Factor Analysis of Mandatory Contact Scale

Measure	Eigenvalue of the First Factor		Percentage of variance explained	
	Phase II	Phase III	Phase II	Phase III
Mandatory Contact Subscale				
Experience	4.48	4.65	74.6%	77.5%
Support	3.47	2.76	57.9%	45.9%
Environment	3.79	3.82	63.2%	63.6%
Interaction	4.19	4.08	69.9%	68.0%

Relationships among subscales in the MCS

Correlations among the four subscales in the Mandatory Contact Scale were calculated for data collection Phases II and III (see Appendix 5.2). As can be seen from the correlation matrices, the subscales are positively correlated. Their interrelations in these Phases (across years two and three of their study) were generally similar. As was expected, consistently strong correlations were found among subscales Experience, Environment and Interaction (.81 to .87). That is, students who were more positive in their assessment of the practicum experience were also more positive in their assessment of the environment in regard to themselves as well as people with disabilities, and reported more comfortable and successful interactions with people with disabilities. Furthermore, the subscale Support was also found to be moderately correlated with subscales Experience, Environment, and Interaction (.51 to .62). As mentioned previously, high correlations between the Experience, Environment and Interaction subscales were expected due to similarity in focus. However, the scales measure specific variables, giving justification to their inclusion as separate entities.

It should also be noted that smaller numbers of students completed the MCS in Phase III which accounts for some of the weaker correlations (see Appendix 5. 2). The correlations among the subscales in Phases II and III of the data collection period were also calculated for nursing and teaching students separately. It can be seen from Appendix 5. 2 that the patterns of relationship for teaching students were similar to those for nursing students across Phases II and III (years two and three of their study). This similarity in patterns of

relationship gives further strength to the reliability of the measure.

Confirmatory factor analysis was also used to examine and establish the structure of the four subscales in the Mandatory Contact Scale. First, the six items in each subscale were randomly paired up into 3 item pairs to reduce the idiosyncratic variance of individual items. Then, these three item pairs in each subscale were used as indicators of each latent variable. There were totally four latent variables representing experience, environment, support and interaction respectively.

The statistical package LISREL (version 8) was used in the analysis. The four latent variables were allowed to be freely correlated. Furthermore, all uniqueness (i.e. measurement error) of the item pairs were freely estimated but were assumed to be uncorrelated. Results showed that the t-values of all lambda (factor loadings) and phi (inter-correlation among the four latent variables) estimates were significant (see Table 5.4). The goodness of fit index was .88 [Chi-square for 48df was 146] and the Tucker-Lewis index was .94. This indicates a moderately good fit of the model specification.

As can be seen from the intercorrelations (see Table 5.4), the latent variables experience, environment, support and interaction were strongly correlated. These were in the same direction and showed similarly strong association as indicated by the simple correlations among the scales. Thus, the confirmatory factor analysis undertaken on the MCS scale gives further support to the four subscale structure.

Table 5.4

Confirmatory Factor Analysis of Mandatory Contact Scale

Latent Variables (Standardised Lambda)					
Indicators/ Item	Experience	Support	Environ- ment	Inter- action	Standardised Uniqueness
Experience					
1 + 13	.90				.19
5 + 17	.89				.20
9 + 21	.89				.22
Support					
2 + 14		.83			.31
6 + 18		.93			.13
10+ 22		.83			.31
Environment					
3 + 15			.84		.30
7 + 19			.89		.20
11+ 23			.80		.36
Interaction					
4 + 16				.90	.19
8 + 20				.90	.19
12+ 24				.87	.25
Correlation					
Support	.66				
Environment	.97	.66			
Interaction	.95	.61	.91		

Self-Efficacy Toward Future Interaction with People with Disabilities (SEIPD)

Self-efficacy is posited as a mediating variable which accounts for feelings of fear and anxiety reported by individuals in their interactions with people with disabilities leading to negative attitudes. This assertion is operationalised in Hypothesis 2 (see Chapter 3) which predicted a negative relationship between the SEIPD and the ATDP. Students with lower levels of self-efficacy toward future interactions with people with disabilities are less positive in their general attitudes to people with disabilities (high score on the SEIPD and low score on the ATDP). The development of this tool is described in Chapter 4.

Reliability and factor analysis of the SEIPD

The psychometric properties of the self-efficacy measure were examined. First, the correlations among the 15 items in the scale for Phases II and III of the data collection are shown in Appendix 5.3. It can be seen that most of the items within the scale were significantly and highly correlated indicating a homogeneous and unidimensional scale (see Appendix 5.3). Reliability was measured by an examination of both internal consistency and test-retest reliability.

Internal consistency of the SEIPD

The internal consistency reliability of the SEIPD as measured by Cronbach's alpha was relatively high. As can be seen in Table 5.5, it ranges from .84 to .90 (Mean=.87) showing a high level of homogeneity between items within the scale

Table 5.5**Reliabilities of the SEIPD Scale**

Reliabilities				
Measure	Number of Items	Phase II	Phase III	Phase IV
Self-Efficacy Scale	15	.90	.87	.84

Test-retest reliability of the SEIPD

Test-retest reliability of the SEIPD scale was established by administering the scale to the same group of respondents initially and across a specific time interval. As with the MCS, care was taken to control factors which may bias effects such as the length of time between administration and environmental factors. Table 5.6 shows that the SEIPD scale has a consistently high reliability with correlation coefficients ranging from +.68 to +.80. Results are comparable to those found with similar attitude measures.

Table 5.6**Test-retest reliability of the SEIPD Scale**

Sample Group	Time Interval	Sample Size	Reliability Co-efficient
Nursing Students 1990	4 weeks	110	+.80
Teaching Students 1990	2 months	90	+.77
Habilitation Students 1990	6 months	45	+.68
Habilitation Students 1991	6 weeks	60	+.72

Factor analysis of the SEIPD

The dimensionality of the SEIPD was examined with principal component analysis (see Table 5.7). The eigenvalue value greater than one criterion and the scree test both suggested a major single factor solution for the data in the various Phases of data collection. Both orthogonal and oblique rotation gave identical results as only one factor was extracted. As can be seen from Table 5.7 , this factor accounted for 47.5% to 64.1% (M=55.1%) of the total variance of this scale. The item-total correlations and the alpha if item deleted statistics are also shown in Table 5.8.

Overall, these results show that items within the scale were uni-dimensional and were measuring the same construct, that of self-efficacy toward future interactions with people with disabilities.

Table 5.7

Factor Analysis of SEIPD Scale

Measure Explained	Eigenvalue of the First Factor			Percentage of variance		
	Phase II	Phase III	Phase IV	Phase II	Phase III	Phase IV
SEIPD	9.62	8.09	7.126	41%	53.9%	47.5%

Table 5.8

Item-Total Correlation of SEIPD Scale

Item No	Corrected Item-total Correlation		Alpha if item deleted	
	Phase II	Phase III	Phase II	Phase III
1	.84	.68	.90	.88
2	.81	.75	.90	.88
3	.82	.78	.90	.88
4	.79	.68	.90	.88
5	.79	.59	.90	.89
6	.83	.72	.90	.88
7	.74	.75	.90	.88
8	.34	.47	.91	.89
9	.80	.66	.90	.88
10	.78	.75	.90	.88
11	.80	.72	.90	.88
12	.76	.70	.90	.88
13	.61	.53	.90	.89
14	.79	.72	.90	.88
15	.86	.70	.90	.88

The results from both reliability and factor analysis showed that the items in this scale were homogeneous and unidimensional. In view of this, an aggregated sum of the 15 items was used in the following analyses.

Nomological network of the SEIPD

The nomological network of the SEIPD was initially evaluated by examining its consistency with similar scales aiming to measure

specific attitudes toward people with disabilities, including the ATDP and the IDP. This was undertaken in 1990 with a group of 110 teaching and 85 nursing students. An analysis of correlations between measures included in the nomological network are shown in Table 5.9. It is acknowledged that this process is ongoing and will continue beyond the confines of this study.

Table 5.9

Correlation matrix of nomological network of the SEIPD

	SEIPD	IDP	ATDP-O	SADP
SEIPD	1.00	-.40*	.45*	.32*
IDP		1.00	-.44*	-.22*
ATDP-O			1.00	.50*
SADP				1.00

* $p < .05$, ** $p < .01$, *** $p < .001$

Key

SEIPD Self-Efficacy Toward Future Interactions with People with Disabilities.

IDP Interaction with Disabled Persons Scale (Gething, 1991a).

ATDP-O Attitudes Toward People with Disabilities Scale (Yuker, Block & Youngg, 1970).

SADP Scale of Attitudes Toward Disabled Persons (Antonak, 1979).

Results of correlation analysis show moderately significant relationships between the SEIPD and the ATDP, IDP and SADP. Similar to previous results from an examination of the MCS these correlations are in line with analyses undertaken in similar studies.

Summary

In the present study, four scales were used in a longitudinal investigation of students' attitudes toward people with disabilities. The first two scales, the ATDP and IDP were well established and have been widely used in various studies. For the other two scales, constructed by the author, (Mandatory Contact Scale MCS and the Self-Efficacy Toward Future Interactions with People with Disabilities, SEIPD), inter-item correlations, Cronbach's alpha and test-retest reliability and factor structures were calculated. Results gave support to their inclusion in the study. Confirmatory factor analysis was undertaken with the MCS indicating a moderately good fit of the model specification thus giving support to the four subscale structure. In conclusion, results generally showed that these two scales were psychometrically reliable and satisfactory. Interactions among these scales are examined in Chapter 6.

CHAPTER 6: RESULTS I: ATTITUDE SCALE RELATIONSHIPS

Introduction

This chapter examines relationships between attitude measures. Relationships between the scale scores within the same Phase of data collection, and in different Phases of data collection, are then examined. As this longitudinal study uses a range of attitude measures, relationships between scale scores both within and across the three Phases of data collection, are important sources of variation and validation of specific attitude constructs. Although the major emphasis of Stage I of the present study is on the outcome of the mandatory disability unit on students' attitudes toward people with disabilities, the research also addresses changes in students' attitudes across the three years of their enrolment. Thus, relationships between scales which extend across this three year period and changes which may further substantiate the influence of specific variables upon attitude change, are reported in this section. In particular, relationships among scale scores in Phase II of the data collection, after completion of the mandatory disability unit, are especially worth investigating. Moreover, significant relationships between the ATDP, the most commonly used measure of attitude toward people with disabilities, the newly developed IDP and the author constructed SEIPD (Self-efficacy) and MCS (Mandatory Contact Scale) will lend support to the validity of the latter two measures.

The following section reports the analysis of attitude scale scores within the same Phase of data collection and across Phases I-III of the data collection in Stage I of the study. Hypotheses testing was also

undertaken with Hypotheses 1-6 which predicted relationships between scale scores.

Chapters 7 and 8 report and discuss demographic variables and the outcome of the mandatory disability unit on students' attitudes toward people with disabilities. The final results chapter, Chapter 9, reports and discusses the results of an experimental intervention with the most negative sub-population of students.

Attitude scale relationships

(i) Relationships between attitude scale scores within the same data collection phase

The attitude measures were generally more highly related in data collection Phase II data collection than in the Phase I data collection (pre-mandatory disability unit). A number of relationships are still evident between data collection Phases II and III (corresponding to years two and three of students' study respectively). Correlations were calculated for the total sample, as well as for teaching and nursing students separately. With only a few exceptions, correlations for teaching and nursing students were similar, further supporting the validity of the measures used for these samples. The summary tables applying to this results section are included in Appendix 6.1.

A number of hypotheses were confirmed by the use of correlation analysis on the scale scores. The ATDP score was negatively related to IDP scores in Phases II and III, except teaching students in Phase III, **Hypothesis 1**. Thus, students less positive in their general attitude toward people with disabilities (i.e., lower score on the ATDP) had higher levels of discomfort in social interaction (i.e., higher score on the IDP).

In Phase II, nursing students' levels of self-efficacy were associated positively with the ATDP. These results give partial confirmation to **Hypothesis 2** which predicted that there would be a negative relationship between the SEIPD and the ATDP. Thus, nursing students with lower levels of self-efficacy regarding future interactions with people with disabilities were less positive in their attitudes toward people with disabilities. This relationship did not apply to teaching students.

Hypothesis 3 which predicted that there would be a positive relationship between the SEIPD and the IDP, was partially confirmed. Nursing students with lower levels of self-efficacy regarding future interactions with people with disabilities (i.e., higher score on the SEIPD) had higher levels of discomfort in social interaction (i.e., higher score on the IDP). These results were not obtained for teaching students whose levels of self-efficacy were unrelated to their attitudes toward people with a disability or with level of discomfort in social interaction.

To test **Hypothesis 4**, an analysis of the relationship between the Mandatory Contact Scale and other measures was undertaken. In Phase II, the Mandatory Contact Scale (MCS) subscales of Interaction, Experience and Environment (nursing students only) subscales were correlated negatively with the ATDP but positively with the IDP. This showed that nursing students who assessed their interactions on practicum with people with disabilities as successful, evaluated the general practicum experience and the environment positively, had more positive attitudes as measured by the ATDP and reported higher levels of discomfort in social interaction (IDP). This gives partial confirmation to **Hypothesis 4** which predicted a negative relationship

between students who assess their mandatory contact placement (MCS) positively and have more positive general attitudes toward people with disabilities. This relationship applied to nursing students but not to teaching students.

Hypothesis 5, which predicted a positive relationship between students who assessed their mandatory contact placement positively (i.e., low score on MCS subscales) and had lower levels of discomfort in social interaction (i.e., lower score on the IDP) was also confirmed. Thus, students who assessed their mandatory contact experience positively had lower levels of discomfort in social interaction with people with disabilities.

Consistently moderate to high correlations in data collection Phases II and III between levels of self-efficacy and the four Mandatory Contact subscales were also observed. Students with higher levels of self-efficacy regarding future interactions with people with disabilities, as measured by the SEIPD, were more positive in their assessment of all facets of their practicum including the general experience, the support given, their interactions with people with disabilities and the environment for both themselves and people with disabilities. These results confirm **Hypothesis 6** which predicted a positive relationship between students who assess their mandatory contact placement positively and have higher levels of self-efficacy toward future interactions with people with disabilities. Thus, students who report a positive assessment of their mandatory contact had high levels of self-efficacy toward future interactions with people with disabilities.

(ii) Relationships between scale scores in different phases of data collection

In this section relationships between different scale scores across different Phases of data collection in Stage I of the study are reported. Although not testing specific hypotheses, these results give further support to the relationship between the measures regarding the specific construct measured, such as the relationship between general attitudes toward people with disabilities and level of discomfort in social interaction.

Stepwise multiple regression analysis was used to examine the relationship of various scales with Phase III ATDP score (Table 6.1). The latter was used as the criterion variable whereas ATDP (Phases I, II), IDP (Phases I, II, III), and MCS (Phases II, III) were the predictors. It was found that ATDP in Phases I and II and the IDP (Phase III) scores were significant. The significant beta values showed that students more positive in their attitudes toward people with disabilities as measured by the ATDP in Phases I and II of the data collection and those who experienced lower levels of discomfort in social interaction as measured by the IDP in Phase III were significantly more positive in their general attitudes toward people with disabilities in Phase III (corresponding to year three of students' study), as measured by the ATDP.

Table 6.1**Stepwise Multiple Regression Analyses on ATDP Phase III Scores**

Predictor Variable	Standardized Beta	Multiple R
ATDP (Phase II)	.44**	.52**
IDP (Phase III)	-.42**	.68**
ATDP (Phase I)	.42**	.80***

* $p < .05$, ** $p < .01$, *** $p < .001$

Thus, students more positive in their general attitudes toward people with disabilities in the initial years of their training had lower levels of discomfort in social interaction and significantly more positive general attitudes in the final stage of training. This suggests that the development of general positive attitudes toward people with disabilities is cumulative and is related to lower levels of discomfort in social interaction. These results give further support to the hypotheses predicting negative relationships between the ATDP and the IDP.

Discussion

Attitude scale relationships

All the hypotheses formulated and tested in this section of the study were fully or partially substantiated as follows:

Hypothesis 1 was confirmed by establishing that a correlation exists between students with more negative general attitudes toward people with disabilities and higher levels of discomfort in social interaction. Discomfort in social interaction is cited (e.g. Donaldson, 1980; Gething, 1992) as a variable worthy of further investigation regarding its influence upon the formation of attitudes to people with disabilities.

Moreover, the finding of a correlation between students with more positive general attitudes toward people with disabilities in the initial stages of training and lower levels of discomfort in social interaction and more positive attitudes in the latter stages of training lend support to this hypothesis.

Thus, the strong relationship established between the IDP and the ATDP strengthen the assertion that discomfort in social interaction is an influential variable in the development of attitudes toward people with disabilities. Establishing this relationship is important, both for this study and for future research in the area of attitude change toward people with disabilities. As the IDP is a new scale there is not a developed body of research examining its relationship to more established attitude measures. Moreover, as the ATDP and the IDP are used consistently throughout the study in Stage I and as a pre-post test measure in Stage II, evidence of this relationship supports the use of these attitude scales.

Hypothesis 2, which predicted a positive relationship between the SEIPD and the ATDP was also partially confirmed. Nursing students with lower levels of self-efficacy toward future interactions with people with disabilities were less positive in their general attitudes toward people with disabilities. Similar results were not found with teaching students who reported higher levels of self-efficacy than nursing students. These results suggest that the strength of the correlation between general positive attitude and level of self-efficacy is greater in subjects displaying more negative attitudes. However, the correlation between the established measure, the IDP, and the author constructed measure, the SEIPD gives further strength to the validity of the latter measure.

Self-efficacy beliefs toward future interactions with people with disabilities are posited as mediating general attitudes toward people with disabilities and level of discomfort in social interaction.

Hypothesis 3 which predicted a negative relationship between the SEIPD and the IDP was partially confirmed. Nursing students with lower levels of self-efficacy regarding future interactions with people with disabilities reported higher levels of discomfort in social interaction. This hypothesis remained unconfirmed for teaching students. As nursing students report more extreme negative feelings toward people with disabilities scale relationships may be stronger than for teaching students who report more positive attitudes. Thus, teaching students levels of self-efficacy were not as strongly related to their attitudes toward people with disabilities when compared with nursing students.

The findings of both Hypothesis 2 and 3 suggest that self-efficacy is an influential factor mediating both attitude change and discomfort in social interaction. The literature supports this assertion with the suggestion that cognitive factors constitute an important dimension in the study of self-efficacy (Fichten & Amsel, 1986). It is further suggested that weak expectations of ability to interact effectively with people with disabilities is related to lack of knowledge about appropriate behaviour and negative attitudes toward people with disabilities (Amsel & Fichten, 1988).

It was also predicted in **Hypothesis 4** that students who assess their mandatory contact placement positively would have more positive general attitudes toward people with disabilities. This was partially confirmed, as nursing students who assessed the MCS Subscales,

Interaction, Experience and Environment as positive had more positive attitudes toward people with disabilities. This gives partial confirmation to the assertion that quality of the contact experience is influential in the formation of positive attitudes. Nursing students who assessed the overall experience of their mandatory contact component, their personal interactions with people with disabilities and the environment for both themselves and people with disabilities as positive, were more likely to have positive attitudes. These findings have implications for the development of quality student practicum placements where students are more likely to have successful interactions with people with disabilities in a positive and supportive environment.

The confirmation of the prediction of a positive relationship between the MCS and the IDP, **Hypothesis 5**, is an important finding. Nursing and teaching students who assessed their mandatory contact placement positively reported lower levels of discomfort in social interaction. Thus, positive reports of the mandatory contact experience was strongly correlated with lower levels of discomfort in social interaction. This is an interesting finding with important ramifications for the development of the practicum placements of nursing and teaching students.

The consistent pattern of moderate to high correlations evident in Phases II and III of the data collection between level of self-efficacy and the four MCS subscales is also of interest. Students with higher levels of self-efficacy were more positive in their assessment of all facets of their practicum including the general experience, the environment for both themselves and people with disabilities, their personal interactions with people with disabilities and the support given by both

the university and staff in the placement environment.

The inclusion of the author-constructed measure, the Mandatory Contact Scale MCS, into these analyses, is important. Although previous studies have isolated the contact variable as influential in the formation of attitudes toward people with disabilities and worthy of further investigation, empirical testing and validation have not been forthcoming. These results give foundation to the assertion that the quality of the contact experience is critical in the consequent formation of attitudes toward people with disabilities. Moreover, as the MCS is a new scale and will undergo further refinement, these results lend further support to its initial validity and reliability.

The last hypothesis tests the relationship between the two scales constructed by the author for the purposes of the study. **Hypothesis 6**, which predicted a negative relationship between the MCS and the SEIPD was confirmed. Students who assessed their mandatory contact experience as positive had higher levels of self-efficacy toward future interactions with people with disabilities. Confirmation of this relationship is gratifying as these scales have not been previously employed with large representative samples. Further ramifications for the importance of ensuring quality placements which will strengthen student's levels of self-efficacy are also evident.

Relationships between scale scores in different phases of data collection

The results of stepwise multiple regression analysis are of interest and give further support to the findings evident in the previous section. The finding which established that attitudes in Phases I and II

of the data collection and level of discomfort in social interaction in Phase III were significant predictors of attitudes toward people with disabilities in Phase III is of note. This result lends support to the assertion that the development of positive attitudes toward people with disabilities is cumulative and is related to lower levels of discomfort in social interaction. Thus, the importance of initial positive attitude can be isolated as an influential variable. The necessity to develop programs which further promote and enhance positive attitudes toward people with disabilities is reinforced by these results.

Summary of major findings

Relationships between scales

Correlations between the four attitude measures (ATDP, IDP, SEIPD and MCS) were analysed. It was found that student responses were more strongly related in Phase II. Findings generally supported the following Hypotheses: **Hypothesis 1** which predicted that students less positive in their general attitude toward people with disabilities would have higher levels of discomfort in social interaction (i.e., scores on the ATDP would be negatively correlated with scores on the IDP) was confirmed.

Partial confirmation was given to **Hypotheses 2 and 3** which predicted that students would have lower levels of self-efficacy regarding future interactions with people with disabilities, were less positive in their general attitudes and had higher levels of discomfort in social interaction. Nursing students' level of self-efficacy (SEIPD) was positively associated with ATDP scores, but negatively associated with IDP scores.

Hypotheses 4, 5 and 6 were confirmed by the findings that students who assessed their mandatory contact placement with people with disabilities positively, had more positive attitudes, lower discomfort in social interaction and higher levels of self-efficacy. **Hypothesis 6** was given further support by consistently moderate to high correlations evident between levels of self-efficacy and the four MCS subscales. Thus, students with higher levels of self-efficacy regarding future interactions with people with disabilities were more positive in their assessment of the general practicum experience, the environment for themselves and people with disabilities, the interactions they had with people with disabilities and the support from the University during practicum.

CHAPTER 7: RESULTS II: ATTITUDE CHANGE ACROSS STAGE I OF THE STUDY

Introduction

This Chapter examines changes in students' attitudes toward people with disabilities across the period of their university enrolment, the influence of attitudes on future career and study choices and baseline demographic data. Findings related to the formation of nursing and teaching students' attitudes toward people with disabilities and influence of the nature of students' contact on resultant attitudes are reported. Hypotheses related to the outcome of the mandatory disability unit on teaching students' attitudes (Hypotheses 7 & 8) and the influence of specific types of contact (Hypotheses 9 & 10) are tested and results reported. Post-hoc findings related to attitude formation in nursing students, differences between the two students groups, the influence of a range of contact variables and the relationship between attitude and future career and study choices are also reported.

In summary, this chapter examines four specific areas:

- i. baseline information and demographic variables,
- ii. attitude formation in nursing and teaching students across Stage I of the study, with specific focus on attitudes subsequent to completion of the mandatory disability unit
- iii. the relationship between a range of contact variables and attitude formation and
- iv. the relationship between attitude constructs and students' choice of future career and post-graduate study.

Demographic variables and background information

Demographic and background data were collected in Phase I of the data collection to give a baseline picture of the total sample and to assess initial similarities and differences between nursing and teaching student (see Appendix 7.1). Chi-square tests were applied to determine whether the distribution was the same for teaching and nursing students, or if there were significant differences between the two samples. As can be seen from Appendix 7.1, the characteristics of teaching and nursing students in terms of gender, age, frequency and context of direct contact with people with disabilities were similar. However, differences in ethnic background and part-time employment were evident, and were statistically significant. A description of the sample population follows.

There were 180 subjects in total, 90 nursing and 90 teaching students, made up of 17 males and 163 females. Gender distribution by student type was similar with nursing students made up of 7 males and 83 females and teaching students 10 males and 80 females. The majority of the students (53%) were in the 15-19 year age group.

Subjects were asked questions regarding the frequency and form of contact with people with disabilities (see Appendix 7.1). Twice as many teaching (N=12) as nursing (N=6) students had daily contact with people with disabilities, although frequency was similar for weekly and monthly contact. The form of the subject's contact with people with disabilities was then considered by posing an open ended question in the questionnaire given to subjects (see Appendix 7.1). Form of contact was coded into three major categories using content analysis (see Chapter 4) as follows:

- i. social contact which included interaction with friends, family or people in a similar social network;
- ii. community contact incorporating interactions which were of a regular nature and took place in a community setting such as, shops, supermarkets, public transport or general neighbourhood interactions and
- iii. professional contact incorporating work based interactions where an unequal status existed between the subject and the person with a disability, such as, part-time employment and university organised contacts.

Generally, contact between nursing and teaching students and people with disabilities were similar. Although not statistically significant, some trends were noted.

More nursing (N=67, 74%) than teaching (N=41,45%) students were involved in paid part-time employment, with the most common employment for nursing students undertaken in nursing homes, retirement centres or hospitals (N=29, 32.2%). These differences were statistically significant. Teaching students' part-time employment was evenly spread between shop/supermarket and community based employment. Significant differences were also evident in regard to ethnic background with more teaching (N=34, 37%) than nursing students (N=13, 14%) reporting parents born overseas.

In summary, baseline demographic information collected in Phase I showed similarities between nursing and teaching students in terms of gender balance and age, as well as frequency and context of contact with people with disabilities. Teaching students experienced more

personal contacts with people with disabilities than nursing students. Significantly more nursing students were involved in paid part-time employment than teaching students, most commonly undertaken in nursing homes and retirement centres. More teaching than nursing students had parents born overseas and spoke a language other than English at home.

Attitude formation in nursing and teaching students

Hypotheses related to teaching students' attitudes toward people with disabilities, formulated in Chapter 3, were confirmed. Significant differences in attitude between nursing and teaching students were found. Differences in general attitudes toward people with disabilities and level of discomfort in social interaction were also evident.

Changes in scale scores on the ATDP, IDP, SEIPD and MCS across different Phases of data collection were analysed with separate two-way ANOVAs with the scale scores as the dependent variable. Time (data collection Phases I, II and III) and type of students (teaching vs. nursing) were respectively within-and between-subject independent variables. To analyse differences across different Phases of data collection, separate ANOVAs were repeated for different combinations of the three Phases of data collection (see Appendix 7.4 and 7.5). Discriminant analysis was then used to explore the differences between teaching and nursing students along the data collection Phase II ATDP, IDP, SEIPD and MCS scale scores (subsequent to completion of the mandatory disability unit).

For scores on the ATDP (see Appendix 7.4) the main effects due to student type were significant in all analyses. An examination of the means showed that teaching students were generally more positive in

their attitudes toward people with disabilities than nursing students. For the transition from years one to year two of the students' study (corresponding to Phase I and Phase II of the data collection), the Student Type X Time interaction and the main effect due to student type were significant (see Appendix 7.4). An examination of the means showed that in Phase I of the data collection (year one), teaching students were more positive in their general attitudes toward people with disabilities than nursing students with differences becoming greater in Phase II (year two). For the transition from year two to year three of the students' study (Phase II to Phase III), a further significant Student Type X Time interaction was found with differences in teaching and nursing students' attitudes lessening between these two Phases of data collection.

In the transition from Phase I to II (i.e. year one to year two), the Student Type X Time interaction and the main effect due to time were also significant for level of discomfort in social interaction. As can be seen from the means in Appendix 7.2, teaching students reported higher levels of discomfort in social interaction in Phase I data collection (year one) and lower levels in Phase II (year two). On the other hand, nursing students reported increased levels of discomfort in social interaction across Phases I to II. For the transition from Phase II to III, the Student Type X Time interaction and the main effect due to student type were significant with both teaching and nursing students levels of discomfort in social interaction decreasing between these two Phases of data collection.

Comparison of the self-efficacy score (SEIPD) showed that in the transition from year one to year two (Phases I-II of the data collection), the main effects due to time and student type were both significant. As

can be seen from Appendix 7.2, teaching students reported stronger levels of self-efficacy than nursing students in both Phases II and III of the data collection. Furthermore, the two groups became marginally less efficacious across from year two to year three (Phases II-III of the data collection).

For the four Mandatory Contact subscales in Phases II and III (years two and three), the two-way ANOVAs showed significant main effect due to student type. As can be seen from Appendix 7.3, teaching students were more positive in their evaluations of the environment, support, positive and interaction subscales than nursing students in both Phases II and III of the data collection.

Discriminant analyses were undertaken to test the hypotheses related to attitude formation in teaching students. Although not testing specific hypotheses, differences in attitude formation of nursing and teaching students was also tested. Wilks' lambda scores, F-values, and standardised discriminant functions are shown in Table 7.1, while mean scores are summarised in Table 7.2. From Table 7.1, it can be seen that the univariate F-values and Wilks' lambdas both indicated that nursing and teaching students were significantly different in all of the scales being measured. Wilks' lambda is the ratio of the within-groups sum of squares to the total sum of squares. Lambda values close to 1 indicate that all observed group means are equal (i.e. group means are not different), whereas values approaching 0 reveal that within-group variability is small compared to the total variability (i.e. group means are different).

Table 7.1

Discriminant Analysis on ATDP, IDP, SEIPD, and Mandatory Contact Scales

	Wilks' Lambda	Univariate F-value [@]	Standardised Discriminant Function
ATDP	.74	49.40*	-.43
IDP	.88	18.89*	.13
SEIPD	.67	71.36*	.53
MCS:			
Experience	.71	58.68*	-.11
Support	.70	61.88*	.51
Environment	.69	65.62*	.57
Interaction	.75	48.43*	-.50

$N_{\text{teaching}} = 71, N_{\text{nursing}} = 74$

[@] Listwise deletion of cases is used when values are missing.

* $p < .001$

Among the teaching students, 88% were correctly predicted by the discriminant function, whereas 86% of nursing students were correctly classified. The overall correct classification rate was 87% reflecting a low level of overlap between the two student groups in their attitudes towards people with disabilities in data collection Phase II of this study (i.e. after completion of the mandatory disability unit or 18 months training).

Differences between teaching and nursing students were also examined by one way ANOVAs on the individual scale scores. In data

collection Phase II, teaching students were significantly more positive in their general attitudes towards people with disabilities (as measured by the ATDP) relative to nursing students (see Table 7.2). The result was similar after controlling for the effect due to the difference in data collection Phase I ATDP score as revealed by an ANCOVA [$F(1, 177) = 58.60, p < .001$]; adjusted mean for teachers was 87.28, for nurses, 75.44. Thus, teaching students became more positive in their general attitude to people with disabilities subsequent to the completion of the mandatory unit, giving confirmation to **Hypothesis 7**. However, an examination of the mean scores across data collection Phases I-III (see Appendix 7.2) shows that teaching students general attitudes remained similar across years two and three of their study while nursing students became slightly more positive from year two to year three.

Table 7.2

ANOVAs of Phase II ATDP, IDP, SEIPD and Mandatory Contact Scales by Student Type

	Wilks' Lambda	Univariate F-value [@]	Standardised Discriminant Function
ATDP	.74	49.40*	-.43
IDP	.88	18.89*	.13
SEIPD	.67	71.36*	.53
Mandatory Contact Scale:			
Experience	.71	58.68*	-.11
Support	.70	61.88*	.51
Environment	.69	65.62*	.57
Interaction	.75	48.43*	-.50

$N_{\text{teaching}} = 71, N_{\text{nursing}} = 74$

[@] Listwise deletion of cases is used when values are missing.

* $p < .001$

In data collection Phase II (i.e. after completion of the mandatory disability study), significant differences were evident with teaching students' reporting lower scores on discomfort in social interaction and higher scores on self-efficacy scales relative to nursing students (see Table 7.2). In other words, teaching students had lower levels of discomfort in social interaction (i.e., high score on the IDP) and higher levels of self-efficacy toward future interactions with people with disabilities (i.e., high score on the SEIPD) than nursing students after completion of the mandatory disability unit. The effect on IDP scores collected in Phase II was similar after controlling for the differences in IDP scores collected in Phase I [ANCOVA $F(1, 177) = 21.71, p < .001$]. These data confirm **Hypothesis 8** that teaching students would show a decrease in level of discomfort in social interaction after completion of the mandatory disability unit.

Analysis of data related to the mandatory contact component of the disability unit were also undertaken. Although they were not testing specific hypotheses, these data give further support to those already confirmed. Significant differences due to student type were also found on all four of the MCS subscale scores (Experience, Support, Environment, and Interaction) collected in Phase II (see Table 7.2). Teaching students were more positive in their assessment of all four subscales of the MCS in Phase II when compared to nursing students.

Qualitative data were collected in Phase II subsequent to the completion of the mandatory unit. Students were asked to specify major concerns regarding interactions with people with disabilities in the questionnaires administered in Phase II of the study (see Appendices 4.9 & 4.10). Students were asked to:

- i. give a one-word descriptor of feelings regarding future interactions with people with disabilities, and
- ii. respond to an open-ended question: 'what are your major concerns regarding interactions with people with disabilities?'

This qualitative methodology (as discussed in Chapter 4) was incorporated to allow subjects to articulate their concerns regarding interaction with people with disabilities. A content analysis of these responses was undertaken (Lincoln & Guba, 1985) to identify students' major fears regarding future interactions with people with disabilities and lend support and explanation to previous analyses reporting differences between nursing and teaching students general attitudes, level of discomfort in social interaction and strength of self-efficacy. Responses to one-word descriptors of feelings about future interaction with people with disabilities were coded into three categories (see Appendix 7.6). All coding was undertaken by the researcher and two colleagues with knowledge of related research. Categories identified included:

- i. words expressing high levels of anxiety,
- ii. words expressing caution or uncertainty, and
- iii. words expressing ease, interest in interaction

Both nursing and teaching students reported a substantial number of concerns related to future interactions with people with disabilities. Descriptive data are reported. A greater number of nursing students expressed high levels of anxiety (N=51), caution and uncertainty (30) relative to teaching students (36 and 23 respectively). Teaching students expressed higher levels of ease and interest regarding future

interactions with people with disabilities (31) than nursing students (9). Thus, a greater number of nursing students expressed feelings of anxiety and uncertainty regarding their future interactions with people with disabilities relative to teaching students who reported higher levels of ease. Subjects were also asked to respond to an open-ended question, as follows: 'outline your major concerns regarding interactions with people with disabilities.' A content analysis of these responses was undertaken using the methodology described in Chapter 4. Six major categories of concern were identified (see Table 7.3).

Table 7.3

Frequency count of major concerns regarding interactions with people with disabilities

Coded response @ (N=90) Major concerns	Nursing Students (N=90)		Teaching Students	
	No	%	No	%
Fear of				
patronising/insulting	18	20.0	36	40.0
behavioural issues	29	32.2	5	23.0
communication	21	23.0	20	22.2
anxiety/discomfort	5	8.8	5	5.5
uncertainty	8	5.5	7	7.7
lack of skill/competence	9	10.0	12	13.3
no concerns	0	0.0	5	5.5

@ responses are included in Appendix 7.5

Fear of patronising or insulting people with disabilities was the most common area of concern for teaching students (36) yet of less concern to nursing students (18). In the category 'behavioural issues', 29 nursing and 5 teaching students expressed concern about the uncertain behaviour of people with disabilities. Concerns regarding

communication with people with disabilities were reported by substantial numbers of teaching (21) and nursing (20) students. Responses identified a variety of communication concerns. The majority of responses were self-focused indicating concerns related to students' ability or inability to communicate (nursing students 10, teaching students 17). A smaller number focused on the communication ability/inability of the person with a disability (nursing students 9, teaching students, 3). A minority of concerns referred to two-way interactions (nursing students 2, teaching students, 0). Anxiety, discomfort and uncertainty were noted as concerns (nursing students 5, 5 teaching students 8, 7). A minor area of concern reported by students were coded into the category of skills/competencies. For teaching students, areas of concern were classroom focused while nursing students' responses focused upon the areas of communication and behaviour. Five teaching students expressed no concerns regarding future interactions with people with disabilities, while all nursing students reported some level of concern. Responses to these questions are a rich source of data which strengthen the quantitative analysis confirming differences between nursing and teaching students' attitudes toward people with disabilities, and assist in explaining these differences.

The nature of nursing and teaching students' contact with people with disabilities

Although contact has been cited as a variable influential in the formation of attitudes toward people with disabilities, there have been few empirical attempts to define contact and isolate its various dimensions. In fact, vague assertions relating to the esoteric concept of 'quality' of contact are interspersed throughout the literature. Research

critiques continually stress the necessity to investigate the range of dimensions inherent within contact (e.g. Donaldson 1980; Siller, 1984; Gething, 1991a). Thus, an investigation of student's contact with people with disabilities is a major focus of this study with a range of contact variables suggested as influential in related literature examined, including: frequency, form, source and type of disability. Two hypotheses related to contact were formulated from the literature review as outlined in Chapter 3.

Post-hoc results of the influence of disability type and placement type on students' attitudes toward people with disabilities are also analysed and results reported. As previous research and related literature suggest inconclusive results, hypotheses were not formulated.

Analyses of results

In the following analyses, the data collection Phase II scale scores (post mandatory disability unit) were used separately as the dependent variable in the analysis of variance. In addition to the independent variable examined in each section, student type (teaching vs. nursing) was included as another independent variable in all analyses. If the two-way interaction was significant, the effect of the independent variable was further examined for each student type. Means were tested further by post-hoc multiple comparisons using the Scheffé test. For simplicity, when the interaction was not significant, only the main effect due to contact with people with disabilities was reported. Since the ATDP and IDP scales were also measured in Phase I data collection, they were used as covariates in the analyses of their respective Phase II scores. Generally, it was found that the ANOVAs and the respective

ANCOVAs produced very similar results. An outline of the results of the analyses of contact with people with disabilities follows.

Frequency of contact

Frequency of contact, although not previously identified as an influential variable in the formation of attitudes toward people with disabilities, was examined in this study. In Phase I data collection, subjects were asked how often they had direct contact with people with disabilities. One-way ANOVAs of ATDP and IDP scores in Phase I and ATDP, IDP, SEIPD and MCS in Phase II with contact frequency as the independent variables revealed non-significant differences in most cases (see Appendix 7.7). Students with different frequency of contacts in Phase I were similar in their Phase I and II ATDP, IDP, SEIPD, Mandatory Contact subscale scores; Environment, Support, and Experience. However, students having quarterly contacts with people with disabilities had relatively higher MCS Environment subscale scores than those in other groups reflecting a more positive assessment of the general environment for both themselves and people with disabilities. Also, students reporting more frequent contact with people with disabilities reported greater acceptance of people with disabilities on a self-report scale.

Overall, the results do not isolate contact frequency as an influential variable in the formation of attitudes toward people with disabilities.

Form of contact

The form of students' contact with people with disabilities was also investigated. As outlined in Chapter 6, form of contact was coded into three major categories: social contact, which included interaction with family, friends or people in a similar social network; community

contact, incorporating regular interactions undertaken in community settings; and professional contact, which included part-time employment and the university organised practicum.

One-way ANOVAs of the data collection Phase I and II scale scores by form of contact revealed significant differences in ATDP and self-rated success of interactions with people with disabilities in Phase I (see Table 7.4). Two-way ANOVAs with student type as an additional independent variable showed the same trends for both teaching and nursing students. Post-hoc multiple comparisons using the Scheffé test showed that students with personal contacts with people with disabilities (e.g. with relatives, friends) were more positive in their general attitudes toward people with disabilities. These students also self-rated their acceptance for people with disabilities as higher than students whose majority contacts were through general community interaction or professional sources which were work or university organised. These results confirm **Hypothesis 9** which predicted that students with personal contacts with people with disabilities would be more positive in their general attitudes than students with professional contacts.

Table 7.4

ANOVAs of ATDP, IDP, SEIPD and MCS by Form of Contact with People with Disabilities

	Form of Contact			F values
	Social	Community	Professional	
Phase I data collection				
ATDP	85.1	81.0	80.2	3.08*
IDP	63.9	67.2	67.3	1.73
Success in interactions with people with dis.	1.7	2.3	2.0	8.78***
Phase II data collection				
ATDP	79.5	83.5	81.7	1.36
IDP	65.3	64.0	62.0	1.00
SEIPD	3.3	3.3	3.1	.37
Mandatory Contact Scale				
Experience	3.3	3.5	2.9	1.59
Support	3.9	4.0	3.7	.49
Environment	3.4	3.3	3.1	.62
Interaction	3.4	3.2	3.0	1.19

*p < .05, **p < .01, ***p < .001.

Source of contact

Students were asked to identify the source of their major contact with people with disabilities over the past 12 months. Source of contact is defined as the manner by which students are introduced to their major interactions with people with disabilities. The sources of contact identified in this study fell into two major categories: those

which were university organised (practicum or coursework) or other sources (family, friends, part-time employment). University organised contacts were seen as taking a more professional form while other contacts, particularly those with family and friends, took a more personal form. One-way ANOVA of the Phase II ATDP scores showed a significant difference between those whose contacts were from university organised activities (e.g., practicum, course work) and those within other contexts (e.g., part-time employment, friends, family) (see Table 7.5) The former were less positive in their attitudes toward people with disabilities as measured by the ATDP than the latter even after controlling for Phase I ATDP scores, [ANCOVA $F(1, 177)=6.21, p<.05$]. This finding supports **Hypothesis 10** which predicted that students whose majority contact with people with disabilities has been university organised will be less positive in their general attitudes toward people with disabilities as measured by the ATDP than students with broader majority contacts. Thus, students who experienced contacts other than those organised by the university (i.e. practicum) were more positive in their general attitudes toward people with disabilities.

Table 7.5

ANOVAs of Phase II ATDP, IDP, SEIPD and MCS by Sources of Contact

	Professional/University Activities		Other Sources		F-value
	Mean	SD	Mean	SD	
ATDP	79.84	11.80	84.55	11.0	6.53*
IDP	65.89	11.17	59.59	11.45	12.33***
SEIPD					
(Teaching Student)	2.60	.75	2.51	.57	.40
(Nursing Student)	3.97	1.16	3.21	1.23	4.83*
Mandatory Contact Scale:					
Experience	3.51	1.83	2.56	1.50	11.55***
Support	4.17	1.64	3.37	1.56	7.92**
Environment	3.44	1.61	2.77	1.42	7.11**
Interaction	3.48	1.52	2.61	1.05	15.15***

When the interaction with Student Type was not significant, only the main effect due to source of contact is shown here. When the interaction is significant, the means and the F-test for teaching and nursing students are shown.

* $p < .05$, ** $p < .01$, *** $p < .001$

Although not testing specific hypotheses, a similar analysis on the data collection Phase II level of discomfort in social interaction score (IDP) showed that the main effect due to source of contact was significant (see Table 7.5). Nursing students whose major contact was through university organised activities (i.e. practicum) had significantly higher levels of discomfort in social interaction than students whose major contacts were through employment, family or

friends. The effect was still significant after controlling for data collection Phase I IDP score, [F (1, 177) = 11.78, $p < .001$]. Thus, students who experienced more personal major contact with people with disabilities, such as family and friends, reported less discomfort in social interaction.

In regard to self-efficacy, main effects and two-way interaction in the 2 Student Types (teaching vs. nursing) X 2 Contact Types (contact through university organised activities vs. others) ANOVA were all significant [i.e. F (1, 165) = 3.86, 59.10, 3.84 for student type, contact type and interaction, $p < .05$, .001, .05 respectively]. More detailed examination revealed that nursing students whose major contact was through university organised activities had lower levels of self-efficacy than those with alternative major contact. Significant differences were not evident with teaching students (see Table 7.5).

In the analysis of the data collection Phase II Mandatory Contact (MCS) Experience, Support, Environment, and Interaction subscale scores, the main effects due to major contact were significant (see Table 7.5). Students with major contact through university organised activities were less positive in their assessment of the practicum experience than those with alternative major contacts.

Nature of practicum/placement environment

The specific nature of the practicum environment was investigated in regard to nursing students only. The rationale for this decision lies with the fact that nursing students experienced a range of placements while teaching students' placements were homogeneous in terms of age range of students and setting (i.e. primary schools).

Data were collected across Phases II and III when nursing students were asked to identify the specific setting of their major placement (see Appendices 4.10 and 4.12 respectively). These settings were then categorised into like groups by the researcher and a colleague familiar with all placement settings. Two major categories of placement emerged: those which were community-based and institutional settings. Community-based settings included educational facilities, such as special schools, early childhood centres and community-based supported accommodation services or day placements. Institutional settings included hospitals or large residential settings which were segregated from the local community. A greater number of students had experienced placements in institutions relative to those which were community-based. Thus, comparative numbers were not thought to be significant enough to generate hypotheses.

However, an analysis of the major placement environment was undertaken to test differences between nursing students' placement experience (institutional versus community-based settings) and relationship with attitude, discomfort in social interaction and strength of self-efficacy.

A preliminary demographic comparison between the nursing students in institutional and community-based settings was also undertaken to assess the extent of possible confounding variables. Results showed that students experiencing either institutional or community based placements were similar in frequency of contact ($M = 3.72, 3.67$ respectively) and time spent with people with disabilities ($M = 4.68, 4.58$ respectively). Furthermore, the age of people with disabilities in both their general ($M = 5.14, 5.36$) and placement contact ($M = 4.91, 4.64$) were similar, [i.e. $F(1,88) = 0.49, 0.55$ respectively, $p > .10$]. These

two groups of students also had similar ratings on their performance in the mandatory disability component of their course, $M = 5.71, 6.03$ respectively, [i.e. $F(1,88) = 1.53, p > .10$].

Having established that there were no significant confounding variables between the two groups, differences in Phase II ATDP, IDP and SEIPD scores of nursing students (i.e. after completion of the mandatory disability unit) in the two placement environments was examined with a series of one-way ANOVA (see Table 7.6).

The effect due to type of major environment in clinical placement for nurses was non significant for general attitude toward people with disabilities or level of discomfort in social interaction. Students placed in an institutional environment reported similar levels of discomfort in social interaction to those in other settings. The trend was similar after controlling for IDP and ATDP scores collected in Phase I.

However, in the analysis of self-efficacy scores (SEIPD, data collection Phase II), the effect due to type of major environment in practicum for nursing students was significant (see Table 7.6). Those placed in an institutional environment had lower levels of self-efficacy regarding future interactions with people with disabilities than those in community based settings.

Table 7.6**ANOVAs of Phase II ATDP, IDP, SEIPD and MCS by Placement Environment**

	Institutional		Non-Institutional		F-value
	Mean	SD	Mean	SD	
ATDP	74.05	9.96	77.85	9.41	3.16
IDP	68.68	9.05	65.94	13.02	1.38
SEIPD	4.11	1.22	3.42	1.06	6.84*
Mandatory Contact Scale:					
Experience	4.84	1.88	2.87	1.23	28.88***
Support	5.05	1.45	4.50	1.32	3.02
Environment	4.83	1.55	2.80	.93	46.50***
Interaction	4.48	1.62	2.95	1.01	23.63***

* $p < .05$, ** $p < .01$, *** $p < .001$

Similar analysis was undertaken with the Mandatory Contact Scale (MCS). Scores on the Experience, Environment, and Interaction subscales showed that the effects due to type of major environment in clinical placement were all significant (see Table 7.6). Nursing students placed in institutional environments were less positive in their assessments of the general placement experience, the environment itself, and the success of their interactions with people with disabilities when compared to those placed in community-based settings. However, there was no difference in students' assessment of the level of support given by university personnel between those who had placement in an institutional setting and those in community-based settings (see Table 7.6). The implications of these results for the development and implementation of clinical placements are discussed in Chapter 8.

Type of disability

The influence of disability type upon teachers' acceptance of integration (Hannah & Pliner, 1983), nurses' attitudes to their patients (Furnham & Pendred, 1983), and on general attitude toward people with disabilities (Gordon, Minnes & Holden, 1990) is documented throughout the literature. As results remain equivocal, specific hypotheses were not generated. However, to establish further empirical evidence, an examination of the effect of contact with people who had a variety of disabilities was undertaken. Disability type was divided into four major categories: physical, sensory, intellectual and multiple disabilities. The two types of contact, including general contact external to the students' university life and contacts which formed part of the mandatory disability unit were examined separately to test the effect of each. This would assist in isolating the effect of the contact component of the mandatory disability unit and follows suggestions from the literature which stresses the need to account for all forms of contact (Wright, 1983, 1988).

i. Disability type in general contact.

Students were asked about their general contact with people with disabilities in the past 12 months in regard to the type disability in major contact. General contact is defined as that other than university organised (e.g. family, friends, work, community). One-way ANOVA of Phase II ATDP by the four types of disability (physical, intellectual, sensory, multiple) revealed non-significant differences (see Appendix 7.8). There were no differences in attitudes as measured by the ATDP among the four types of disability contact even after controlling for Phase I ATDP scores, ANCOVA $F(3, 174) = 1.74$. IDP scores collected in Phase I showed non significant differences among the four groups,

[ANCOVA $F(3, 174) = 2.29$ $p > .10$] after controlling for Phase I IDP score. An analysis of the Phase II self-efficacy score found a significant main effect due to disability type in general contact (see Appendix 7.9). Students in contact with people with physical and intellectual disabilities had higher levels of self-efficacy regarding future interactions than those in contact with people with sensory and multiple disabilities. Analysis of the Mandatory Contact Scale Experience, Environment, and Interaction subscale scores showed that the main effects due to type of general disability contact were significant. Students having contact with people with an intellectual disability were less positive in their assessment of the general experience, the environment for themselves and people with disabilities as well as their interactions with people with disabilities than those whose contacts were mainly with people with sensory, multiple and physical disabilities (see Appendix 7.8).

ii. Disability type in placement

Students were asked similar questions regarding disability type of the person/people they had met during the practicum component of the mandatory disability unit. One-way ANOVA of the Phase II ATDP score (post mandatory disability unit) by the four types of disability (physical, intellectual, sensory, multiple) revealed significant main effects (see Table 7.7). Results show that students whose major contacts were with people with physical disabilities had the highest ATDP scores denoting more positive general attitudes towards people with disabilities. This was followed by those who had contact with people with sensory disabilities. Students in contact with people with intellectual or multiple disabilities reported the least positive attitudes.

The trend was similar after controlling for Phase I ATDP, [ANCOVA $F(3, 171) = 6.63, p < .001$].

Table 7.7

ANOVAs of Phase II ATDP, IDP, SEIPD and MCS by Disability Type in Placement

	Physical		Intellectual		Sensory		Multiple		F-value
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	
ATDP	90.86	8.75	80.80	11.07	87.53	10.91	78.28	11.98	6.38***
IDP	62.14	12.37	64.21	11.40	61.53	13.20	64.37	11.66	.36
SEIPD	2.23	.65	3.38	1.23	2.89	.98	3.13	1.04	4.13**
MCS:									
Experience	1.96	.59	3.42	1.86	2.54	1.80	3.34	1.75	3.55*
Support	3.51	1.64	3.97	1.63	3.42	1.73	4.24	1.65	1.26
Environment	2.21	1.01	3.51	1.63	2.45	1.21	3.26	1.59	4.04**
Interaction	2.36	.91	3.38	1.61	2.76	1.15	3.26	1.27	2.60

* $p < .05$, ** $p < .01$, *** $p < .001$

In an analysis of the Phase II self-efficacy score, the main effect due to the type of disability contact on placement was significant (see Table 7.7). Students who experienced contact with people with physical and/or sensory disabilities had higher levels of self-efficacy than those whose contacts were with people with multiple and/or intellectual disabilities.

An analysis of the influence of type of disability was undertaken in regard to student's assessment of their practicum experience. A similar analysis on the Phase II MCS Experience and Environment subscale scores revealed that the main effects due to the type of disability contact on practicum were also significant (see Table 7.7). It was found that students having contact with people with intellectual and multiple disabilities were less positive in their assessment of the placement

experience generally and of the environment itself, than those in contact with people with sensory and physical disabilities. For the Support and Interaction subscale scores of the MCS , the differences among the four disability types were not significant.

Summary

Differences between nursing and teaching students

Differences between teaching and nursing students were examined by one way ANOVAs of the individual scale scores. This analysis suggests that as they gained more professional experience, teaching students will become more positive in their general attitude to people with disabilities relative to nursing students (after completion of the mandatory disability unit), in confirmation of **Hypothesis 7**.

An increase in nursing students' level of discomfort in social interaction from Phase I to Phase II data collection was reported. On the other hand, teaching students reported a decrease in level of discomfort in social interaction across this period, confirming **Hypothesis 8**. Differences between nursing and teaching students' attitudes toward people with disabilities were given further confirmation and explanation by analyses of responses to one-word descriptors and an open-ended question.

Contact with people with disabilities

Contact was investigated in a variety of forms including frequency, form, context and type of disability. Analyses was undertaken using both ANOVA and ANCOVA. Students who had more frequent contacts with people with disabilities reported greater acceptance. In Phase II, teaching students who reported increased contact across the

past three months had higher levels of self-efficacy than those reporting similar or decreased contact. Form of contact was also investigated. Post-hoc Multiple Comparison with Scheffé test showed that students with majority personal contacts with people with disabilities (relative or friend) had higher ATDP scores and greater acceptance on self rated measure of success compared to those who had majority community or professional contacts. Students whose major context of contact was through University organised activities (e.g. practicum, coursework) were less positive in their general attitude to people with disabilities than those with alternate major contacts giving substantiation to **Hypothesis 9**.

Furthermore, the students whose major contacts took a personal rather than professional form had more positive general attitudes toward people with disabilities and lower levels of discomfort in social interaction confirming **Hypothesis 10**. Nursing students whose major contact was university organised had lower levels of self efficacy as measured by the SEIPD, than those with alternate major contacts. Both teaching and nursing students with university organised contact as their major source of contact were less positive in their assessment of the mandatory placement (MCS) on all four subscales.

Type of disability in general contact (other than that organised by the University) was also investigated. Students who had contact with people with physical and sensory disabilities had higher levels of self-efficacy regarding future interactions than those who had contact with people with multiple or intellectual disabilities. Further, those students who had general contact with people with intellectual disabilities were less positive in their assessment of the mandatory

placement (MCS experience, environment and interaction subscales). Contact on practicum was also investigated. Significant main effects were found with MCS assessment and ATDP scores.

Students who had major contact with people with physical disabilities on practicum had higher ATDP scores denoting more positive attitudes and reported higher levels of self efficacy (SEIPD). Students who had contact with people with intellectual and multiple disabilities as part of their mandatory placement were less positive in their assessment of the two MCS subscales, experience and environment.

Students placed in an institutional environment had lower levels of self-efficacy regarding future interactions with people with disabilities than those in community-based settings. Similar analysis on ATDP and IDP scores was not significant. However, analysis of Phase II MCS experience, environment and interaction scores and placement environment were significant. Nursing students who were placed in institutional settings were less positive in their evaluation of their placement on these three subscales than were those placed in community-based settings.

Future career and study choices

Introduction

This section of the results chapter discusses an investigation of students' future career and study choices undertaken in year three, the final year of students' enrolment (i.e. Phase III of the data collection). Results support anecdotal evidence and observation suggesting that beginning nurses do not choose to work in disability nursing, do not see it as a career option and show little interest in post-graduate study, even though they complete mandatory study in the area as a pre-requisite to registration (H. Ang, Personal Communication, June, 1992). Little formal research has been undertaken investigating where beginning nurses work or why they make specific career or post-graduate study choices.

Although the career choices for beginning teachers are not as broad as beginning nurses, the literature reports that beginning teachers are more accepting of the practice of integration after completion of pre-service special education study (Westwood, 1984; Center & Ward, 1987).

Empirical evidence of any relationship between attitude, future career and study choice would have major implications for employers and for the development of both undergraduate and post-graduate curricula. Yet, the influence of attitude upon future career and study choice has not been a focus of previous studies.

As contact is repeatedly cited as a variable influencing attitude change, the relationship between students' assessment of the mandatory contact component of their course, choice of future career options and post-graduate study is also examined.

Inferential and descriptive analyses were undertaken and post-hoc results are discussed in the following section.

Descriptive information

Distributions of intended career and study choices are shown in Appendix 7.8. It can be seen that the majority of the teaching students (77) would consider working in a primary school which integrated students with disabilities. On the other hand, only 11 nursing students would choose to work in the disability field in the coming year. More than half of the teaching students (51) would consider specialising in special education in the future, whereas only 26 nursing students stated they would consider working in the disability field at some time in the future.

In regard to students' future study plans, nearly all teaching students would consider either certainly (50) or possibly (31) undertaking post-graduate study in the disability or special education field whereas the majority of nursing students (57) would not consider undertaking post-graduate study in this area. However, with the exception of a few students, a substantial number of both teaching and nursing students would consider undertaking some post-graduate study in another area (44 and 69 respectively), showing a moderate to strong interest in further study.

An analysis of nursing students' reasons for not choosing to work in the disability field found that the majority thought it was not their 'cup of tea' (32), preferred another area of nursing, usually general (18), would only take it on if desperate for a job (6) or were not interested as future career prospects were limited (5).

The majority of nursing and teaching students believe that they require knowledge of disability and special education (84 and 82 respectively). A further 78 teaching students and 68 nursing students agreed that their respective professions needed specific skills and competencies in this area. Nearly all students (82 teaching, 85 nursing) believed that the contact experience which formed part of the mandatory disability unit was necessary and the majority (60 teaching, 78 nursing) were satisfied with these contacts (see Appendix 7.9). However, a number of teaching students stated that the contact was too short in duration.

When asked about the role of the nurse in the disability field, nursing students gave a range of descriptions, the majority falling within a medical model. Role descriptions ranged from caregiver (16) to assisting with activities of daily living (16), assisting people gain independence (16), as an advocate (13), educator/teacher (10), administrator of medication (6) and caring for people with disabilities in a general hospital (5).

Results of analyses

Two-way Student Type X Future Career variable ANOVAs on ATDP, IDP, SEIPD and MCS, and other related variables were carried out for each of the future career variables. It was found that all interaction terms were non significant. Thus, for simplicity, the results of one way ANOVAs were tabulated here (see Appendix 7.10 and 7.11). As shown in Appendix 7.10, students who considered working in the special education or disability nursing field the year after graduation or in the future, or were interested in undertaking post-graduate study in this field, were significantly more positive in their general attitudes to people with disabilities as measured by the ATDP and had higher

levels of self-efficacy regarding interactions with people with disabilities as measured by the SEIPD. These results suggest that students with more positive general attitudes toward people with disabilities are more likely to choose to work in the Special Education/Disability field relative to those with more negative general attitudes. Also, students with more positive general attitudes reported greater interest in undertaking post-graduate study in Special Education/Disability compared to those with more negative attitudes. Furthermore, students with higher levels of self-efficacy toward future interactions with people with disabilities were more likely to choose to work in the special education/disability field and undertake post-graduate study in this area were also supported. Students considering post-graduate study in an area alternative to special education or disability nursing had higher levels of discomfort in social interaction (IDP).

Students' evaluations of the mandatory contact component of their disability course were then undertaken to assess the relationship between contact experience and attitude variables. Quite consistent patterns of relationship were evident with the MCS subscales (see Appendix 7.11). Students who would consider working in the Special Education/Disability field in the next year or in the future, or would consider post-graduate study in this field were invariably more positive in their assessment of their mandatory placement in terms of the general experience, the level of support given by the university, the environment as it affected themselves and people with disabilities and the success of their interactions with people with disabilities.

An analysis of contact variables was undertaken to assess the influence of the mandatory contact placement upon choice of career

and post-graduate study (see Table 7.8). It was found that students who would consider working in the Disability/Special Education field next year or in the future had contact with younger subjects both in their general contact and placement contact. They also rated themselves as possibly gaining higher marks in their respective mandatory units. Those students considering post-graduate study areas other than special education/disability had a lower level of acceptance for people with disabilities and had experienced contacts with older subjects in their university placements.

Summary

Students who considered working with students with disabilities or in the disability nursing fields in the future were significantly more positive in their general attitude to people with disabilities (ATDP), and had higher levels of self efficacy (SEIPD). These students were also more positive in their assessment of the mandatory contact placement on all four MCS subscales. Furthermore, students considering post-graduate study in the Special Education/Disability field had lower levels of discomfort in social interaction (IDP).

Students choosing alternative areas of work and post-graduate study had a lower level of acceptance of people with disabilities. They had also experienced major contacts with older subjects with disabilities on placement. On the other hand, students with contact with younger people with disabilities on placement rated themselves as achieving better possible results in their Special Education/Disability course and would consider working in the field in the future.

Table 7.8: ANOVAa of Contact Variables and Performance Rating (Phases II and III) by Future Career and Study Choices

Phase II		Frequency	Age	Feeling	Age	Self-Rating in DD Course
1. Work in disability field	Yes	3.44	4.38	2.39	3.54	6.46
	No	3.45	5.19	2.70	4.59	6.00
	F-Value	.01	11.33***	5.48	2.67***	4.21*
3. Work in disability in future	Yes	3.45	4.45	2.42	3.45	6.50
	No	3.44	4.85	2.58	4.32	6.13
	F-Value	.00	2.87	1.33	15.55***	2.86
4. Post-grad in disability	Yes	3.44	4.59	2.37	3.72	6.38
	No	3.45	4.73	2.64	4.16	6.21
	F-Value	.00	.33	4.03*	3.71	.60
5. Post-grad study in another area	Yes	3.37	4.77	2.64	4.16	6.34
	No	3.62	4.43	2.28	3.59	6.17
	F-Value	1.50	1.88	6.62*	5.49*	.53
9. Contact experience satisfactory	Yes	3.45	4.71	2.61	4.00	6.24
	No	3.50	4.47	2.16	3.81	6.52
	F-Value	.05	.63	6.81**	.40	.93
Phase III						
1. Work in disability field	Yes	3.43	4.59		3.75	
	No	3.79	5.34		4.52	
	F-Value	3.78	8.13***		8.62**	
3. Work in disability field in future	Yes	3.44	4.52		3.82	
	No	3.65	5.13		4.24	
	F-Value	1.42	5.47*		2.43	
4. Post-grad in disability	Yes	3.47	6.64		3.82	
	No	3.65	5.12		4.31	
	F-Value	.87	3.49		3.31	
5. Post-grad study in another area	Yes	3.61	5.00		4.19	
	No	3.44	4.63		3.92	
	F-Value	.74	1.83		.86	
9. Contact experience satisfactory	Yes	3.50	5.02		4.13	
	No	3.87	4.31		3.78	
	F-Value	2.39	4.43*		.83	

*p < .05, **p < .01, ***.001.

The following chapter, Chapter 8, discusses the major findings as reported in this chapter. Chapter 9 reports and discusses the results of the experimental intervention while Chapter 10 outlines the major implications and recommendations of the study.

CHAPTER 8: DISCUSSION OF ATTITUDE CHANGE ACROSS STAGE 1

Introduction

This Chapter discusses results of an examination of changes in students' attitudes toward people with disabilities as reported in Chapter 7. Its focus is on the three major areas examined, as follows:

- (i) attitude formation and change in nursing and teaching students across the period of their university study, particularly on completion of the mandatory disability unit,
- (ii) the nature of students' contact with people with disabilities and its influence on attitude,
- (iii) the influence of attitude on students' future career and post-graduate study choices.

Baseline demographic information is also discussed. Findings related to these areas will be of interest to those involved in the development of undergraduate curricula and education policy, service providers, individual advocates and advocacy groups, as well as people with disabilities.

Demographic variables and background information

An examination of baseline demographic and background material is critical to this study which collects data across a three year period. A heterogeneous sample was employed in relation to age, gender and initial contact with people with disabilities. Although initial contact experiences of nursing and teaching students with people with disabilities did not show significant differences, an interesting trend emerged. It was evident at the initial data collection that the majority of teaching students' contact with people with disabilities took the form of social and professional interactions which were likely to be on a personal level. On the other hand, the majority of nursing students'

contacts took the form of community interaction which was likely to be of a more impersonal nature. It is possible that these differences in type of contact had some influence on resultant attitudes.

This breakdown of form of student's contact with people with disabilities into three distinct categories is of note. The data related to form or nature of contact were coded, using content analysis (see Chapter 4), into three types of contact: social, community and professional. These findings, along with findings from previous studies (e.g., Leonard & Crawford, 1989), support the development of hypotheses related to the nature and influence of personal versus professional contact and attitude formation.

Differences in nursing and teaching students' part-time employment were evident with more nursing students involved in this activity. Nursing student's employment was centred in nursing homes, retirement homes and hospitals while teaching students were more evenly spread in community settings. The nature of nursing student's interactions with people with disabilities in these institutional settings would be very different to those which took place within community based settings. The influence of different environments on students' attitudes is explored in this study and discussed in this chapter. Differences in ethnic background of nursing and teaching students were also apparent, although any assumptions regarding influence of ethnicity on attitude formation are not made as further empirical study is necessary.

Attitude formation toward people with disabilities across Stage I of the study

Teaching students became more positive in their general attitudes toward people with disabilities across the three phases of data collection, particularly on completion of the mandatory disability unit. They also reported higher levels of self-efficacy, less discomfort in social interaction and were more positive in their rating of the mandatory placement relative to nursing students. In regard to nursing students, the trend toward increased discomfort in social interaction, lower levels of self-efficacy and more negative general attitudes toward people with disabilities on completion of their mandatory study, are of concern and strongly challenge any assumption that the inclusion of mandatory disability units in undergraduate nursing courses will automatically lead to more positive attitudes. The significant influence of contact on attitude formation, notably contacts which formed part of the mandatory disability unit, is established, with most nursing students rating their mandatory clinical experience with people with disabilities negatively.

Findings related to self-efficacy beliefs are of particular note as this construct has not been empirically examined in previous research. Teaching students with strong levels of self-efficacy after completion of the mandatory special education unit were more efficacious in their feelings toward future interactions with people with disabilities one year later. Hence, it may be asserted that teaching students' self-efficacy beliefs continued to strengthen on completion of the mandatory unit as they began to feel more confident in their interactions with people with disabilities. Qualitative data supports this finding as teaching students expressed fewer concerns regarding interactions with people with disabilities, relative to nursing students.

Changes in attitude and level of discomfort in social interaction across years one to two of students' university enrolment give further explanation to variables influencing attitude formation. Nursing students' increase in level of discomfort in social interaction subsequent to the completion of the mandatory disability unit was of note. These findings are in direct opposition to those reported in Phase I data collection when nursing students reported significantly less discomfort in social interaction relative to teaching students.

There are a number of possible explanations for this finding. Nursing students' perceptions of professional interactions with people with disabilities may be very different from their experiences during the mandatory unit, leading to higher levels of discomfort in social interaction and more negative general attitudes. This assertion is supported by the highly significant differences evident between nursing and teaching students assessments of their mandatory placement. It is possible that nursing students' negative reports of mandatory contact with people with disabilities could, in turn, mediate their level of discomfort in social interaction and general attitudes toward people with disabilities. Qualitative data reported in Chapter 7 offers a further explanation of these quantitative findings with large numbers of nursing students expressing fear, anxiety and uncertainty regarding future interactions with people with disabilities. Both nursing and teaching students identified 'fear of the unknown' as a major concern with nursing students specifically stating: 'I could be like them' and reported concerns in 'overcoming anxiety and apprehension' and 'not knowing how the person will act'. Teaching students' uncertainties were focused on their lack of competence in 'not knowing how to act and react', being 'unsure of what to say or do', and 'not knowing how to approach people with disabilities'.

It is of interest that concerns of nursing students focus upon the possible behaviour of the person with a disability, while teaching students concerns focus more on their own behaviours and uncertainties. Nursing students' focus on the hypothetical behaviour of people with disabilities is mirrored in their concerns regarding fear of possible challenging behaviour exhibited by people with disabilities, not evident in reports by teaching students. However, it is not so much the number of responses that are important, but the type of responses given. An alarming finding was the number of nursing students who expressed concerns regarding fear of physical harm in interactions with people with disabilities. Many feared physical violence, stating their major concerns as: 'being attacked by someone', 'that I could get hurt' or 'the possibility of physical harm or attack'. The term 'violence' was evident in 10 responses, 'hurt me' in 6 and 'attack' or 'attacked' in 5. Overall, 23% of nursing students expressed fears regarding physical harm in interactions with people with disabilities. By comparison, teaching students responses in regard to 'behavioural issues' took a different form, concentrating on their own ability or inability to deal with challenging behaviours including, 'not being able to handle unforeseen behaviour', 'not being able to handle difficult incidents', and 'coping with uncontrollable behaviour'. Such variance in responses could be related to the different age groups and specific disability groups with whom teaching and nursing students interact. As reported in the previous chapter, teaching students major interactions are with young people whereas nursing students interactions are spread across a wider age range and are most likely to be with adults. Moreover, teaching students had a greater number of interactions with children with physical or mild levels of intellectual disability, whereas nursing students interactions were with adults with

higher support needs, the majority of whom had an intellectual disability. The context of the interaction also differed with the majority of nursing students experiencing contact with adults with disabilities in segregated settings, while teaching students contacts were with children in integrated school environments.

Nevertheless, the large number of nursing students who expressed fears regarding physical violence is noteworthy as it gives an indication of the strength of their concerns regarding future interactions with people with disabilities and explains some of the observed behaviours as evidenced in anecdotal reports (e.g. Roden, 1989). The strength of nursing students' fears go beyond those which may be caused by social forces such as media portrayal or general community attitudes. Once again, teaching students' responses reflect the nature of their contact with people with disabilities which took the form of teacher-pupil interactions within a classroom environment.

A further area of concern reported by significant numbers of teaching and nursing students fell into the category of 'communication'. While this finding is supported by literature suggesting that communication is often a barrier to positive attitudes (Makas, 1988), and that communicative power is a critical factor in successful integration (Williams, 1991; Arthur & Butterfield, 1993), it has implications for future curriculum and practicum policy and planning. Responses from both teaching and nursing students included, 'not being able to communicate, talk or relate', 'they won't be able to communicate with me' and, 'there may be misunderstandings'. An analysis of whether communication concerns were self-focused (e.g. 'I can't make myself understood'), focused on the person with a disability, (e.g. 'they won't be able to understand me') or two-way, (e.g. 'not understanding the person and them not understanding me') was

undertaken. The majority of responses moved from being self-focused to those which focused on the person with a disability. Few responses reflected concerns regarding interactive communication between students and people with disabilities. Teaching students reported greater personal concerns regarding communication and were less focused on the behaviour of the person with a disability relative to nursing students.

Students' responses mirror theoretical frameworks cited in the literature. Nursing students' responses reflected a succumbing, framework (see model of attitude formation discussed in Chapter 3, see Figure 3.4) in which the difficulties and obstacles faced by people with disabilities are viewed as overwhelming and encompass the person's individual characteristics (Wright, 1983). On the other hand, teaching students were more concerned with issues of respect and dignity, reflecting a coping view of life with a disability (Wright, 1983, see Figure 3.4). It is possible that these results reflect the different theoretical models presented to students in teaching and nursing courses. They also reflect the literature which identifies nurses' emotional reaction to interactions with people with disabilities and frustration when they cannot assist a patient in attaining a total state of health (e.g. Geskie & Salasek, 1988). Resultant negative attitudes have been attributed to these emotions (e.g. Sadlick & Penta, 1975; Murray & Chambers, 1991; Biordi & Oermann, 1993). An analysis of these findings lead to further questioning of the appropriateness of medical models of disability. These results suggest the need to incorporate a model which reflects a coping view of life with a disability in all related courses.

The idiosyncratic nature of teaching students' professional contacts with people with disabilities was mirrored in their responses

regarding level of competence or skill in teaching students with disabilities. Areas of concern focused on their professional competence as teachers, including; 'not being able to teach them anything', not being able to adequately program in class', 'coping with individual needs' and 'adapting practices to cater for individual needs'. These results highlight teaching students' concerns regarding level of competence, as identified in the literature (Stephens & Braun, 1980; Center & Ward, 1987). This is of concern as related literature suggests that teachers' reported confidence in their ability to teach students with disabilities is related to positive attitude (Stephens & Braun, 1980). On the other hand, nursing students' reported concerns regarding competence focussed on difficulties in communication and possible challenging behaviours of people with disabilities, including; 'not knowing what to do if they become aggressive', 'I won't know how to respond to them', 'not having enough knowledge to deal with them' and 'not being sure of what to do'. In line with these results, the significant numbers of nursing and teaching students reporting concerns regarding communication with people with disabilities identifies the lack of support they were given in this area and the need to address this issue in future curriculum development.

The different trends in attitude formation in nursing and teaching students across Stage I of the present study are of interest and give some explanation to variables influencing attitude formation. In particular, the identification of teaching and nursing students' concerns regarding competence in professional interactions with people with disabilities and nursing students' fear of physical violence, help to explain the strength of the reported attitude change and have major implications for the development and implementation of future disability-related units.

The shift toward more positive attitudes as reported by teaching students is also of note. Although teaching students did not experience an extensive organised placement specifically with students with disabilities, they were required to have ongoing contact with a student in an integrated school setting as part of the assessment component of the mandatory unit. Further interactions with students with disabilities also took place during their five week practicum. It is testimony to the success of the mandatory unit that high levels of fear and anxiety expressed by teaching students in year one of their university study was overcome in year two after completion of the mandatory unit.

As suggested, reasons differences between teaching and nursing students' attitude formation may be due to the differences in theoretical approaches to disability underpinning respective curricula and the specific nature of their contact, particularly the environment in which this takes place. Results of this study have wide-ranging implications for those involved in education, in particular, practitioners, academics and researchers. As the mandatory inclusion of special education at undergraduate level is a recent initiative in New South Wales, and indeed across Australia, related discussion or debate is limited. Evidence of the positive outcome of the mandatory special education unit on teaching students in terms of attitude formation, lowering of level of discomfort in social interaction and strengthening of self-efficacy, have widespread implications for integration programs, curriculum development and future research initiatives.

Teaching students' positive assessments of their contacts with students with disabilities on practicum and as part of the mandatory unit in special education, contain significant policy implications for educators planning similar units. As it is likely that initial positive

experiences with people with disabilities become a critical pre-requisite to the success of future programs of integration, similar experiences need to be fostered and included as part of all mandatory special education units. In this way, teachers concerns regarding their limited knowledge of students' with disabilities and lack of access to information (Schultz, 1982; Horne, 1983; Nader, 1984; Knoff, 1985) may be lessened.

Findings related to nursing students call for a review of the structure of mandatory disability units in undergraduate nursing courses. As positive experiences cannot be expected to take place on an ad-hoc basis, placements need to be carefully structured and students must be given adequate support to ensure that fears and concerns regarding interactions with people with disabilities are not exacerbated.

One of the most notable findings of the study is the pervasive influence of the nature of contact with people with disabilities. A discussion of results of an analysis of students' contact with people with disabilities across the three years of their university study may give further insight into the influence of this variable on attitude formation.

The influence of contact with people with disabilities on student attitudes

Nature of the contact

From an examination of findings related to contact, it is clear that the critical issue in ensuring positive attitudes toward people with disabilities is the nature of the interaction and the nature of the environment in which the contact takes place. A range of variables related to student contacts with people with disabilities were examined in this study including frequency, form, source and nature of disability.

In line with findings from previous studies (e.g., Antonak, 1981), frequency of contact was not found to be a significant variable influencing attitude, level of discomfort in social interaction or strength of self-efficacy. However, few students had previous close personal interaction with people with disabilities (see Appendix 6.1).

The testing of hypotheses predicting the influence of personal contact (i.e. social or community) as compared to professional (i.e. work, practicum), yielded interesting results. Confirmation of Hypothesis 9 which predicted that students with more personal contacts with people with disabilities (e.g. relative, friend) would be more positive in their general attitudes toward people with disabilities was of note. While this finding is not surprising, previous empirical evidence for the assertion that personal contacts with people with disabilities lead to more positive general attitudes has been limited.

These findings have implications for the development and implementation of curricula in undergraduate university courses. In student groups exhibiting more negative attitudes, peers with personal experience with people with disabilities could share their experiences, facilitating group discussion and lessening fears and anxieties. By ensuring that access and equity policies are put into practice through active encouragement of students with disabilities to enrol in tertiary institutions, discomfort in social interaction may be lessened and positive attitudes enhanced. Recommendations related to these issues are outlined in Chapter 10.

Sources of contact

While it is important to establish that personal contact leads to more positive attitudes towards people with disabilities, the sources through which contacts are established are also of interest. Sources of contact are defined in this study as the manner by which students are introduced to their major interactions with people with disabilities. Within the context of this study these were posited to take two major forms; university organised (i.e. practicum or assignment-based contact) and other (i.e. family, friends, work). Results confirming that students whose source of contact was university organised were less positive in their general attitudes toward people with disabilities and had higher levels of discomfort in social interaction, support previous findings. Nursing students' high level of discomfort in social interaction are of particular concern as they suggest that professional interactions which took place on practicum led to stronger feelings of discomfort. These results are of concern when examined in light of students' limited experience of people with disabilities other than practicum. Few students, in particular nursing students, had major contact with people with disabilities in their personal lives across the period of their university study, isolating the important role of the practicum and/or assignment-based contact.

Also significant are the low levels of self-efficacy reported by nursing students whose major interactions with people with disabilities took place during the mandatory practicum. An explanation for this difference may lie in the idiosyncratic nature of the contact nursing students experience on clinical placement. As discussed in the following section, nursing students experienced a majority of institutional placements (i.e. hospitals and segregated institutions) compared to those which were community-based (i.e. day

placements, schools and educational centres). On the other hand, teaching students' practicum placements were more homogeneous as they took place within an integrated school environment. Not surprisingly, students whose major contact was either assignment based or on practicum, were less positive in their assessment of the practicum experience. These results reinforce the need for a breadth of placement experience.

Thus, the nature of the placement and the quality of contact with people with disabilities become critical issues due to their major influence upon attitude formation. These findings highlight and reinforce the need for careful consideration of the nature of students' placements and the necessity for appropriate preparation and support given to students. A wider experience of community based placements for nursing students may lead to greater ease in interaction and assist the formation of positive attitudes.

Influence of the placement environment

As the nature of students' placements was posited as a critical prerequisite to the development of positive attitudes, the specific environment of their major placement was examined. This was undertaken with nursing students only, as teaching students placements were homogeneous in nature (i.e. schools). A closer examination of the specific environment of their major placement is called for by results reporting that nursing students became more negative in their attitudes toward people with disabilities across Stage I of the study.

The specific environment of nursing students' major placement were coded and categorised into two types:

- (i) institutional (i.e. hospitals and large segregated institutions), and

- (ii) community-based services (i.e. supported accommodation, day placements, educational services).

As large numbers of nursing students experienced institutional placements with a minority experiencing community-based placements, related hypotheses were not formulated. For this reason, it is noted that these post-hoc findings must be interpreted cautiously. However, an analysis of variance yielded interesting results. Nursing students in institutional placements reported significantly lower levels of self-efficacy in interactions with people with disabilities along with more negative assessments of their placement experience.

This finding is of concern for a number of reasons. It is critical that a wider range of contacts with people with disabilities are provided for nursing students. Personnel involved in nursing students' clinical placements often take a pragmatic approach, with focus on the traditional health care model of hospitals or institutions. However, many nursing programs have identified the need to place students in community-based services such as supported accommodation facilities, early intervention centres and community options programs (Ang, 1992). The results of this study call for a major reconceptualisation of the nature of nursing students' placements in the disability area. The need for future research which assesses the outcomes of a range of models of clinical placement upon students' attitudes toward people with disabilities is also identified as are the policy implications regarding appropriate support given to students both before and during practicum.

Influence of disability type in general contacts

Findings investigating the relationship of disability type with a range of attitude constructs (i.e. general attitudes, level of discomfort in interaction and self-efficacy toward future interactions) suggest that

both level of self-efficacy and assessment of the mandatory contact experience were influenced by the type of disability of the person with whom students had major general contact (i.e. those other than university organised). Students in general contact with people with physical and/or sensory disabilities had higher levels of self-efficacy toward future interactions than those in contact with people with intellectual or multiple disabilities. A surprising finding was that disability type in general contacts did not significantly influence level of discomfort in social interaction. A possible explanation for this is that general contacts are more likely to take a personal form with closeness of the interactions overriding any unease or discomfort and type of disability becoming secondary to the personal characteristics. It follows that less discomfort and higher levels of ease develops between people with and people without disabilities who interact on a personal level. However, because the SEIPD is a measure of professional interaction with people with disabilities, students' feelings toward interactions with people with sensory and intellectual disabilities remain inefficacious as they do not feel competent within a professional context. Also, nursing students who had general contacts with people with intellectual disabilities were less positive in their rating of the practicum component of the mandatory unit. It is possible that students in general contact with people with disabilities are more likely to have an 'insiders' perspective of disability (Wright, 1983, 1988) viewing people as individuals with the same rights and choices as themselves and consequently feeling a sense of unease with the medical model of disability common in many practicum placements.

Influence of disability type in practicum contacts

Results of the relationship between disability type on practicum and the three attitude constructs examined in this study are of note.

Students who experienced practicum contacts with people with physical disabilities reported more positive general attitudes and higher levels of self-efficacy, followed by those in contact with people with sensory disabilities. In line with results of general contact, students whose major contacts were with people with intellectual and multiple disabilities were the least positive. An interesting difference between general and practicum contacts was the more positive attitudes toward people with sensory disabilities in their practicum contact. A possible explanation for this is that students' had few personal contacts with people with sensory disabilities, with the majority of interactions taking place on practicum. Thus, fears related to communication, as reported in Chapter 7, may have been exacerbated once interaction took place, suggesting the need to include augmentative and alternative communication within related curriculum.

Students in contact with people with intellectual and multiple disabilities were less positive in their assessment of the Experience and Environment subscales of the Mandatory Contact Scale, possibly reflecting the specific nature of the environment, their concerns regarding physical harm and the inability to communicate with people with disabilities.

Although these findings are supported by results from previous studies which suggest that interactions with people with physical disabilities are likely to be more positive than those with people with intellectual disabilities (e.g. Rees, Spreen & Harnadek, 1991), they have major ramifications for those involved in developing undergraduate nursing and teaching courses and cannot be taken on face value alone. While the finding that students in contact with people with intellectual and multiple disabilities are less positive is not surprising

due to expressed fears regarding interactions, this should not become an expectation without further examinations. The focus of the mandatory unit in disability, undertaken by nursing students, is on people with a developmental disability, the majority of whom have intellectual and/or multiple disabilities. It is not reasonable to suggest that students undertake more placements with people with physical and sensory disabilities, in the hope they become more positive. These students will interact with all people with disabilities in their professional lives and will, once practitioners, be influential in the nature and quality of service delivery.

The necessity to address the need for better professional preparation of students prior to and during the practicum experience is strongly evident from findings of the present study.

Future career and study choices

Results of an examination of relationships between the attitude constructs and the mandatory contact experience with students' future career and post-graduate study choices, yielded a number of interesting findings. Once again, it must be noted that these post-hoc results must be interpreted cautiously.

The fact that only 37% of nursing students stated that they were interested in working with people with disabilities in the future is of interest. This is even more notable when compared with the vast majority of teaching students (i.e. 90%) expressing interest in working in special education or in a mainstream school which integrated students with disabilities. It must be mentioned here that the figures for nursing students are likely to be inflated due to the extreme shortage of nursing positions in general hospitals in NSW at the time this student group graduated (1992). Thus, the likelihood of graduates applying for positions in the speciality areas of psychiatric and

developmental disability nursing, where jobs were still available, was higher than it would normally be. Although it would be expected that new practitioners may choose to work in a general area of nursing as their first preference after graduation, the large numbers stating they may never choose to work with people with disabilities is concerning when students are trained in this specific area and qualify for registration as developmental disability nurses. Policy implications related to mandatory curriculum and nurse registration requirements are evident from these findings, and are discussed in Chapter 10.

Results of one-way ANOVAs show a number of significant relationship between the attitude constructs with both future career and post-graduate study choice. The influence of negative attitudes, higher discomfort in social interaction and lower level of self-efficacy on students' choice of future career and post-graduate study was of concern. The influence of the nature of placement contact on future career choice was also of note. Students with positive contact experiences were more likely to choose to work in the disability field than those who assessed their major placement negatively. Results were similar for post-graduate study choice as students with positive assessments of practicum more likely to choose post-graduate study in the special education/disability area. Thus, yet again, the nature of contact with people with disabilities can be isolated as a variable influential in future career and study choices and must be addressed in future curriculum and policy development.

An analysis of qualitative data reporting nursing students' reasons for not choosing to work in the disability field gives further explanation to the quantitative data. The majority of nursing students (68%) stated that working with people with disabilities was not their 'cup of tea' or that they preferred another area of nursing. Smaller

numbers said they would only work in the field if they were desperate for a job and that the disability area did not offer career prospects. Students were also asked to describe how they perceived their role as nurses in the disability field. Results showed a level of role confusion with the majority of students stating that their role had a medical or caregiver orientation (53%) while 18% saw their role as assisting independence, 14% as an advocate and 11% as an educator or teacher. These results suggest the need for discussion and debate surrounding the career prospects for nurses in the disability field and the nature of their role in this area. They also have have implications for those involved in the development of undergraduate nurse education curricula and registration requirements.

Conclusion

A range of interesting findings with major implications for the professional education of nurses and teachers are evident from the results of Stage I of the present study. The negative shift in attitudes toward people with disabilities as reported by nursing students across their period of university study is of note and is suggested to be related to the idiosyncratic nurse education curriculum including the type of theoretical model underpinning courses and nature of the mandatory contact experience.

The shift to more positive attitude in teaching students, which was found to be cumulative across their three year period of study, is an equally critical finding. Although the specific nature of the course content and contact with people with disabilities experienced by teaching students may influence attitude formation, caution must be applied as the mandatory unit is not a unitary variable.

Evidence of the strong influence of contact on attitude formation has major ramifications for policy and curriculum development and implementation of future undergraduate nursing and teaching courses. The significance of establishing contacts which lead to positive interactions early in students' enrolment cannot be overstated, as results suggest that initial positive contacts are critical to continuing positive attitudes. Also of concern, is the potential influence of the nature of contact, resultant attitude formation and future career and post-graduate study choices. Although it must be acknowledged that the majority of nursing graduates choose general nursing as their initial preference (Morris & Wang, 1989), it is concerning that so few would consider working with people with disabilities. These findings have major implications for those involved in the development and delivery of both the theoretical and clinical components of the mandatory disability units. These implications and related recommendations are presented in Chapter 10.

Thus, findings from this study challenge the platitude that all mandatory disability units lead to a greater awareness and acceptance of people with disabilities. They may also provide the impetus for those involved in similar areas to undertake research investigating better models of mandatory curriculum development in this area. As these findings confirm previous research findings that nurses hold negative attitudes toward people with disabilities (e.g. Brillhart, Jay & Wyers, 1990), the need for intervention at an undergraduate level is evident. A further rationale for the necessity for intervention with groups holding negative attitudes is suggested in the literature with an emphasis on empirical examination of a range of theoretical models of attitude change (Chubon, 1992). The present study aims to address this issue by the implementation of an experimental intervention with the

most negative sub-population of students (see Table 4.1). As nursing students have been identified as holding more negative attitudes toward people with disabilities in Stage I of the study they become the target population in Stage II. Also, as self-efficacy has been established as a construct influential in attitude formation toward people with disabilities in Stage I, a model of self-efficacy training is implemented and tested in Stage II. The following chapter reports and discusses this experimental intervention.

CHAPTER 9: EXPERIMENTAL STUDY

Introduction

This Chapter reports and discusses Stage II of the study which takes the form of an experimental intervention with nursing students found to be the most negative group of subjects in Stage I. The need to address any development of negative attitudes in professionals who interact with people with disabilities is suggested in related literature (e.g. Yuker, 1988; Chubon, 1982, 1992). This intervention study, undertaken two months after the last data collection of Stage I, aims to test the most influential theoretical model of attitude change and make recommendations for future policy and practice. The experimental design of the study draws on the theoretical foundations of Stage I of the present study which establishes self-efficacy as an influential variable in attitude formation toward people with disabilities. This finding is a strong rationale for the inclusion of self-efficacy training as one intervention model.

The findings of this intervention study reaffirm the need for considered planning and implementation of both the theoretical and practicum component of disability related courses. Implications for future policy development and related research are discussed.

Attitude change research

Introduction

A range of models of attitude change has been employed in empirical studies with related literature focusing on the efficacy of specific models of attitude change. Extensive reviews of attitude change research up until 1989 did not find adequate evidence to

support the effectiveness of any particular approach over another (Shaver, Jesunathadas, Curtis & Strong, 1989). Although the model of information and direct contact is commonly employed and is asserted to be effective, results of interventions using this strategy have been deemed equivocal because of limited sample size, poor research design and inconsistency (Shaver, Jesunathadas, Curtis & Strong, 1989; Yucker, 1988; Antonak & Livneh, 1988).

The limited use of theoretical conceptualisations of attitude definition and change are suggested as reasons for inconsistent findings in attitude change research (Chubon, 1982, 1992; Shaver, Jesunathadas, Curtis & Strong, 1989; Antonak & Livneh, 1988; Yucker, 1988). In the meta-analysis undertaken by Shaver and his colleagues (1988) only 194 effect sizes out of 705 (i.e. 27%) came from comparisons in which an attitude change theory was the explicit basis for the experimental treatment. These authors suggest that the lack of theoretical bases, standardised definitions, independent variables and reliable and valid measures lead to a trial-and-error approach resulting in unsubstantiated conclusions and little basis for generalisation (Chubon, 1992).

These limitations, as outlined in the earlier research critiques, have been taken into account in the development of the experimental design of this study. This design is based upon a conceptual model of attitude change, including an exact definition of attitude, as outlined in Chapter 3. Each treatment is underpinned by a strong methodological and conceptual base. Moreover, each measure of attitude employed in the study has proven reliability and validity.

This experimental study addresses the research question; 'what are effective methodologies for producing attitude change toward people with disabilities?' A number of hypotheses predicting strength of specific models in bringing about attitude change toward people with disabilities were formulated and tested and results are reported and discussed in the following sections.

Models of attitude change

Chapter 3 briefly outlines the range of models of attitude change employed in studies aimed at enhancing positive attitudes toward people with disabilities and proposes a conceptual model of attitude change (see Figure 3.5). Further discussion of the most commonly used models of attitude change toward people with disabilities is included here as a rationale for the specific instructional methodologies implemented in the study. A review of attitude change literature also provides a rationale for the development of specific hypotheses to be tested in this phase of the study. As outlined in Chapter 3, models of attitude change take two major forms: information about people with disabilities and direct or indirect contact with people with disabilities. These are discussed as follows:

i. Information about people with disabilities

Instructional strategies

Instructional models used in research aiming to modify attitudes toward people with disabilities generally take two distinct forms. The first is the provision of direct information about people with disabilities. The second takes the form of prescriptive instructional kits or packages which include training guidelines as well as information about specific disabilities. Both models are likely to incorporate a range

of strategies such as group discussion and media presentation. These models are prescriptive in that they incorporate a structured format with provision of direct information the major strategy.

Although statistically significant increases in positive attitudes of the subjects are reported in studies incorporating this methodology, variables other than information are rarely isolated (Eichinger, Rizzo & Sirotnik, 1992)

Pre-packaged teaching or curriculum kits aim to change attitudes through the presentation of persuasive factual information are becoming increasingly popular amongst educators and service providers, often as a direct response to legislative change enforcing integrative practices (e.g. Gething, 1994b). It is suggested that this strategy does not necessarily lead to positive attitude change as strategies included in a pre-packaged kit may not be broad enough to increase awareness of the similarities between people with and without disabilities and are often of short duration (Thurstone, Willet & Widerman, 1985).

Although there is some evidence in the literature to support the provision of information as a lone strategy it is not thought to be a strong factor in the promotion of long-term, positive attitude change toward people with disabilities (Antonak, 1981; Fichten, Hines & , 1985).

Disability simulation.

Disability simulation is the 'taking on' of a disability by someone without a disability e.g. spending time in a wheelchair. The rationale behind this strategy suggests that simulation of a disability gives participants an awareness of the reality of living with a disability.

Simulations are commonly used across a range of populations to promote an understanding of how individuals cope and adapt to their disability (e.g. Wesson & Mandell, 1989). From this experience, it is purported that participants may develop greater understanding and empathy leading to acceptance of, and positive attitudes toward, people with disabilities. The simplicity of this assumption has engendered considerable criticism in the literature due to the short term retention of positive attitudes and the possibility of reinforcing a stereotypical view of disability by focusing on the difficulties and hardships faced by people with disabilities (Wilson & Alcorn, 1969; Wright, 1983, 1988; Gething, 1994b).

Results of studies using disability simulation remain equivocal with some reporting a shift to positive attitudes when role simulation incorporated real-life situations (e.g., Florian & Kehat, 1987). However, it is cautioned that simulation experiences which highlight difficulties and obstacles faced by people with disabilities may lead to the perpetuation of stereotypes and an exacerbation of fears (Wright, 1983, 1988).

Although it seems that this strategy has a strong influence on the emotional component of attitudes it is most effective when used in association with other strategies so that its effects can be monitored (McKerracher, 1982).

Persuasive messages.

The use of persuasive messages includes using live, video or audio modalities to promote positive attitude change. It is suggested that the greatest potential for changing negative attitudes may be through the use of effective media presentations as a method of disseminating

information (Matkin, Hafer, Wright & Lutzker, 1983; Eichinger, Rizzo & Sirotnik, 1992).

This strategy of attitudinal change is often paired with instructional strategies although research examining the use of media as a lone medium are reported. A study of print media revealed no significant difference between the attitudes of students who had read about people with disabilities and those who had not (Stevens & Allen, 1984). The viewing of videos and films are reported to bring about positive attitude change (Handlers & Austen, 1980; Eichinger, Rizzo & Sirotnik, 1992). One successful intervention incorporating media as a strategy included the portrayal of people with disabilities within a live performance (McKerracher, 1982). Findings from a study of the effects of media on children's attitudes towards people with disabilities indicated that the use of film alone was not sufficient to change attitudes (Westervelt & McKinney, 1980). In support of this finding a more recent study of teacher education students found that the use of video instruction did not unduly influence attitude formation (Pilkington & Klas, 1989).

General consensus suggests that these modalities are most effective when used in conjunction with other strategies (Donaldson, 1980; Westervelt & McKinney, 1980; Rees, Spreen & Harnadek, 1991; Eichinger, Rizzo & Sirotnik, 1992). As most studies are of a short-term duration and are not empirically based, results remain equivocal.

Group discussion.

Group discussion has been commonly employed as a strategy of attitude change, often in conjunction with media presentations. Research critiques of attitude change have adopted a cautionary stance

in regard to the use of group discussion as a lone strategy. This strategy is viewed as problematic due to the possibility that unstructured group discussion can strengthen previously held beliefs about people with disabilities, leading to a polarisation of attitudes (Gottlieb, 1980; Donaldson, 1980; Wright, 1983). The importance of identifying group attitude prior to intervention is highlighted with recent literature suggesting that intervention should focus on groups who hold the most negative attitudes (Chubon, 1992).

ii. Direct or indirect contact with people with disabilities.

The term 'contact' refers to any interaction between people with and without disabilities (Paris, 1993). There is strong evidence to suggest that direct contact with people with disabilities, in itself, does not necessarily produce positive attitudes. Moreover, unstructured social or professional contacts can reinforce stereotypes and perpetuate negative attitudes (Donaldson, 1980; Wright, 1988).

Studies examining increased contact through integration, without planned activities to promote acceptance, resulted in no change in attitudes of peers without disabilities (Voeltz, 1980; Gottlieb, Corman & Curci, 1984). Furthermore, the literature repeatedly indicates that students without disabilities often perceive their peers with disabilities as less socially acceptable, resulting in negative attitudes (Donaldson, 1980; MacMillan & Morrison, 1984). Recent studies incorporating leisure or recreation programs as strategies for attitude change have yielded positive outcomes (e.g. McCleary, & Chesteen, 1990; Vandercook, 1991) yet specific strategies included in these models apart from social interaction have not been identified.

A seminal and comprehensive review of research found the effect of direct contact in bringing about positive attitude change toward people with disabilities to be inconsistent (Donaldson, 1980). Three major characteristics common to contacts resulting in positive attitude were isolated as follows:

- i. Contacts with people with disabilities need to be carefully controlled and structured,
- ii. People with disabilities must have at least equal status to people without disabilities, and
- iii. People with disabilities should not act, or be depicted, in a stereotypical manner.

Many programs developed since this time have used this model to underpin their methodological framework (e.g. McKerracher, 1982; Gething, 1984a; Gething, 1994b). The aim of programs incorporating contact as a strategy of attitude change is to minimise perceived differences between people with and without disabilities. It is purported that if these factors are not taken into account the possibility of negative or aversive social interaction remains (Donaldson, 1980).

Current attitude change literature suggests that a critical prerequisite to successful interventions is equal status representations of, or interactions with, people with disabilities (Wright, 1983; Lyons, 1990). Equal status relationships are consistently defined as interactions in which the person with a disability is approximately equal in social, educational and vocational status (Paris, 1993). Contacts of this nature are more likely to lead to the belief that people with disabilities lead socially valued lives (Lyons, 1990; Paris, 1993) On the other hand,

interactions where the person with a disability is significantly younger, is in a position of receiving assistance such as a nurse-patient relationship or whose lifestyle is not seen to have social value, may perpetuate negative fears and beliefs.

Contacts which take an indirect form, such as exposure to film or video do not necessarily lead to positive attitudes (Westervelt & McKinney, 1980; Pilkington & Klas, 1989).

Overall, there is agreement that the effect of contact on attitude change is dependent upon the nature or type of contact (Yuker & Block, 1986; Berrol, 1984; Paris, 1993). Moreover, the majority of studies lack uniformity of research design and methodology and neglect to clearly isolate and define the contact variable, precluding broad-based generalisations or replication (Berrol, 1984; Rees, Spreen & Harnadek, 1991). However, there is consensus that contact which is structured and direct, takes place between equal status peers who are portrayed as leading socially valued lives, is more likely to bring about a shift toward positive attitude (Donaldson, 1980; Rees, Spreen & Harnadek, 1991; Lyons, 1990).

Combination of strategies

It must be noted that although the above models are discussed individually, the majority of experimental interventions use a combination of models. Current consensus suggests that a combination of accurate information combined with close personal contact with people with disabilities, incorporating equal status contact as suggested in the literature (Donaldson 1980; Rees, Spreen & Harnadek, 1991; Gething, 1994b), is the most effective strategy for achieving an outcome of positive attitude change. A wide range of

strategies are typically incorporated into undergraduate course curricula. For these reasons, specific combinations were chosen as experimental models to be implemented in this study.

Models of attitude change employed in experimental study

Three models of attitude change were employed in the experimental design of this study. These were chosen by taking into account the results of previous studies, the idiosyncratic nature of the subjects in regard to expressed fears as evidenced in Stage I of the study and the type of teaching methodologies commonly employed in undergraduate nurse education programs. These models are discussed as follows:

Media + Discussion

Interventions using a range of media are commonly employed in attitude change research, usually accompanied by structured or unstructured group discussion. Structured group discussion is suggested as an effective medium for attitude change as findings of previous studies suggest the need for further empirical testing of this methodology, particularly with an established negative group. Unstructured group discussion can lead to a polarisation of attitudes toward people with disabilities (Wright, 1983, 1988). The model of media and discussion was chosen as it is commonly employed in undergraduate programs as a teaching methodology.

Media + Discussion + Equal Status Peer

Throughout the literature, the influence is stressed of equal-status contact and socially-valued portrayals of people with disabilities in bringing about positive attitudes (Donaldson, 1980, Wright, 1983, 1988 Lyons, 1990).

Equal-status contact with a person with a disability was added to the Media+Discussion model for a number of reasons. First, nurses' contacts with people with disabilities are likely to involve interactions of an unequal status as the nurse takes on a professional, higher status role. Also, most nursing students, who were subjects of this study, had major contact with people with disabilities within an institutionalised environment as compared to contact with people who are integrated into the community (see Chapters 7 and 8). It is possible that such interactions reinforce stereotypes and lead to negative attitudes. Recent studies incorporating equal status contact into their methodology report positive outcomes (Gething, 1992). It is also asserted that positive attitudes and reduced discomfort can be produced by a relatively short intervention (Donaldson, 1980).

It is clear that further research is necessary to give stronger and more current empirical validation to this methodology. Thus, the addition of an equal status peer to the Media plus Discussion methodology (T2) will empirically test the strength of this specific variable.

Self-Efficacy Training

In Chapter 3, perceived self-efficacy is defined as a person's judgment of his/her capabilities to organise and execute courses of action required to carry out designated types of performances (Bandura, 1986). The feelings of fear and subsequent high levels of discomfort in interaction with people with disabilities evidenced in the findings of this study, have conceptual similarity to inefficacious feelings as described by Bandura (1977a, 1986). Hence, it is asserted that self-efficacy is a mediating variable influencing attitudes toward people with disabilities. To test this proposition, self-efficacy training was

incorporated into the experimental intervention. Table 3.2 outlines the four major sources of knowledge about self-efficacy: performance attainments, vicarious experience, verbal persuasion and physiological state. In the self-efficacy intervention (T3), strategies related to performance attainments and vicarious experience were implemented. A rationale for the choice of these specific strategies are outlined:

(i) Strategies related to performance attainments were chosen as related literature (e.g. Schunk, 1990) suggests that this is the most influential source of efficacy information as it is based on mastery and success experiences. The strong relationship between the quality of an individual's thinking and subsequent related performance accomplishments is also asserted (Bandura, 1989). Bandura uses the term 'anticipatory scenario' to describe the way a person visualises or perceives a future event. Such scenarios are asserted to be a powerful determinant of future performance. In this sense, an individual's perception of his or her efficacy influences the types of anticipatory scenarios he or she construct and reiterate. Those with high self-efficacy visualise successful scenarios which provide a positive guideline for performance. Those with low self-efficacy visualise failure scenarios which undermine and inhibit performance by focusing on what may go wrong (Bandura, 1989). The use of cognitive simulations wherein subjects visualise themselves executing activities previously viewed as problematic, enhances the development of positive scenarios and successful performance (Bandura, 1986; Feltz & Landers, 1983, Kazdin, 1978).

It is likely that the numerous and wide-ranging concerns expressed by nursing students regarding future interactions with people with disabilities (see Chapter 6) lead to low self-efficacy and the visualisation

of negative anticipatory scenarios. Individuals with a strong sense of self-efficacy focus their attention on how to master tasks, while those plagued with self-doubt typically dwell on factors that may go wrong.

(ii) The second area of self-knowledge about efficacy implemented in this experimental treatment is vicarious experience (see Table 3.2). Related studies focus on the development of competencies in particular areas through the use of guided mastery modelling (Bandura, 1988). Modelling has long been acknowledged as an effective technique for developing intellectual, social and behavioural competencies (Bandura, 1986, 1988). The use of role play and modelling is cited in the literature as enhancing attitude and behaviour change (Sarbin, 1964, Clore & Jeffrey, 1972). Strategies related to verbal persuasion and physiological state were not included in this treatment due to the lack of evidence of long lasting changes to level of self-efficacy (Bandura, 1986) and the possible intrusive nature of strategies related to physiological state/emotional arousal.

Method

A four-group randomised pre-post test experimental design was utilised in this stage of the study. Nursing students (N=90), from the original sample, were randomly allocated to a control group and three experimental conditions as summarised below. All groups were similar in size to usual tutorial groups and were enrolled in a Behavioural Science, Communication Skills unit at an Australian University.

i. **Treatment 1 (T1) Media + Discussion + Peer:** this treatment aimed to enhance positive attitude toward people with disabilities through the use of media and discussion with the addition of

personal contact with a peer with a disability, of similar age and equal status.

- ii. **Treatment 2 (T2) Media + Discussion:** this treatment aimed to enhance positive attitude toward people with disabilities through the use of media and discussion.
- iii. **Treatment 3 (T3) Self efficacy Training:** this treatment aimed to enhance positive attitude toward people with disabilities through the use of self-efficacy training based on the work of Albert Bandura (1977, 1986).
- iv. **Control (C1):** The Control group had undertaken similar Behavioural Science/ Communication Skills classes as all three treatment groups, leading up to the treatment sessions but did not participate in any activities incorporated into the three treatment groups.

Rationale for choice of subjects

Nursing students were chosen as the subjects in this experimental study for a number of reasons. Although studies of attitude change commonly use university students in health related courses as subjects, there is little clearcut empirical evidence of widespread negative attitudes in this population (Chubon, 1992). More specifically, there are few empirical studies of attitude change toward people with disabilities which include undergraduate nursing students as subjects. Studies which examine changes in nursing student's attitudes may provide previously unavailable information.

A further rationale for the choice of subjects lies with the assertion that subjects with more negative attitudes should be specifically

targeted in programs of attitude change (Chubon, 1992). The findings of Stage I of the present study reporting that nursing students become more negative towards people with disabilities on completion of the mandatory disability unit are a strong rationale for intervention with this group of students. It is further noted that, as subjects with negative attitudes may be resistant or immune to change agents that may influence others, any movement toward more positive attitude in this population is notable (Chubon, 1992).

Implementation

Treatments took place during students' tutorial time for three hour long sessions across a three-week period (nine hours total) at the students' place of study in the usual tutorial rooms assigned for classes. Sessions formed part of the students' Behavioural Science/Communications class. All students were given a similar rationale for the inclusion of the three sessions within their Behavioural Science classes and were unaware that the content of each treatment group was substantially different. The control group was given a 3-week communication and study skills session which was also presented to the treatment groups on completion of their three week intervention. In this way students were not disadvantaged or advantaged by what they viewed as a rotational session.

Conceptual content for each treatment was controlled by precise lesson plans and presenter consistency (see outline/format for each session Appendix 9.1). The same trainer was used for all three treatments and the control to maximise consistency between sessions.

Pre-intervention data was collected immediately prior to initiation of the treatments. Post- intervention data was collected one week after

completion of the treatment. The following sections outline the hypotheses formulated in this stage of the study. Results of an analysis of the testing of these hypothesis are then reported.

Hypotheses

A number of hypotheses was formulated and tested, as follows:

As it was important to establish the effect of the three intervention models on attitude change attitudes at both a general (ATDP) and personal (IDP) level, the following hypotheses were formulated.

Hypothesis 11

All three experimental models (T1, T2 and T3) will be more effective in bringing about general positive attitude change toward people with disabilities (higher score on the ATDP) than occurs for the control group (C1) who receive no intervention.

Hypothesis 12

All three experimental models (T1, T2 and T3) will be more effective in lowering levels of discomfort in social interaction (lower score on the IDP) than occurs for the control group (C1) who receive no intervention.

In Stage I of the study self-efficacy has been proposed as a construct which measures attitudes on a professional level. Inefficacious feelings are reported as similar to the fears and anxieties expressed by nursing students in regard to future interactions with people with disabilities. An intervention model of self-efficacy training based on work undertaken by Bandura (1986) is incorporated in this

experimental study. Testing of the outcome of this intervention is important to establish the strength of this model and the influence of this previously unexplored attitude construct.

Hypothesis 13

An intervention model of self-efficacy training (T3) will lead to higher levels of self-efficacy toward future interactions with people with disabilities (lower score on the SEIPD) compared to the control group (C1) who do not receive the training.

Equal status contact with people with disabilities is identified in the literature as a variable influential in positive attitude change (e.g. Wright, 1983, 1988; Lyons, 1990). Also, as nursing students' negative attitudes reported in Stage I of the study are related to their professional interactions with people with disabilities and may be due, in part, to the unequal role relationship between themselves and people with disabilities, the following hypothesis has been developed to test the influence of equal status contact on feelings of self-efficacy toward future professional interactions.

Hypothesis 14

An intervention model based on Media+Discussion+equal status peer contact (T1) will lead to higher levels of self-efficacy (lower score on the SEIPD) than the control group (C1) which does not receive the training.

Although interventions employing discussion and media are commonly employed in attitude change research and as teaching strategies in undergraduate curricula, results remain inconclusive with the suggestion that unstructured group discussion may lead to a

polarisation of attitudes, with negative attitudes becoming even more negative (Gottlieb, 1980; Wright, 1983). These assertions led to the development of the following hypothesis.

Hypothesis 15

An intervention model based on Media+Discussion (T2) will not be as effective in lowering discomfort in social interaction (lower score on the IDP) compared to the other two treatment models (T1 and T3).

Results of the testing of these hypotheses were analysed and are reported in the following section.

Analyses of Results

Means and standard deviations of pre-post test scores

The treatment and control groups were identified as follows: Treatment One (T1) Media + Discussion + Peer, Treatment Two (T2) Media + Discussion, Treatment Three (T3) Self-Efficacy Training and Control Group (C1). The ATDP, IDP and SEIPD (self-efficacy) scores were the dependent variables in individual ANCOVAs. Results of ANCOVAs are interpreted cautiously due to relatively small numbers in experimental groups.

Treatment group (3 groups) was the between-subject independent variable whereas the respective pre and post-test scores were the covariates. Pre-post test mean scores on the ATDP, IDP and SEIPD are shown in Table 9.1. Mean scores show a trend toward more positive general attitudes on the ATDP after the treatment and compared to the control. Similar trends are evident in level of self-efficacy toward

future interactions with people with disabilities, indicating higher levels of self-efficacy in most treatment groups at the post-test stage.

Table 9.1

Means and Standard Deviations of Pre and post-test ATDP, IDP and SEIPD Scores

	ATDP		IDP		SEIPD	
	Mean	SD	Mean	SD	Mean	SD
Pre-test						
Control	83.10	12.01	59.29	12.84	3.24	.75
Media+Disc+Peer	78.08	10.51	65.68	9.63	3.85	.82
Media+Discuss	84.64	12.93	61.81	11.39	3.64	.81
Self-Efficacy	74.05	9.68	64.10	8.78	3.45	.61
Post-test						
Control	81.24	11.18	60.81	8.82	3.68	.81
Media+Disc+Peer	85.35	12.34	64.18	8.87	3.10	.66
Media+Discuss	86.14	10.90	61.35	9.47	3.19	.70
Self-Efficacy	79.30	12.37	63.30	7.45	2.76	.69

Note. C1 control = Experimental control group, Media+Discuss+Peer = T1 group, Media+Discuss = T2 group, Self-Efficacy Train = T3 group. N_{control} = 22, N_{Media+Discuss+Peer} = 26, N_{Media+Discuss} = 22, N_{Self-Efficacy Train} = 20.

Main effects due to treatment in relation to changes in treatment groups by control and post-test scores on the ATDP, IDP and SEIPD were then examined and are shown in Table 9.2. The main effect due to treatment was significant for the ATDP scores $F(3,68) 5.93, p < .05$ (see Table 9.2). This result confirms that the treatment groups did bring

about positive attitude change toward people with disabilities at a moderate level of significance. Further analysis is necessary to test the strength of specific models of intervention when compared to the control.

The ANCOVA for IDP scores reports that the treatment groups did not show a significant difference in level of discomfort in social interaction, although there was movement in the expected direction with the intervention groups T1, media+discussion+peer and T3, self-efficacy training reporting less discomfort in social interaction and higher levels of self-efficacy after the treatment when compared to the control $F(3, 68) 2.84$ n.s (see Table 9.2). Thus, levels of discomfort in social interaction with people with disabilities were not significantly lessened by the interventions. A trend toward higher levels of discomfort in social interaction in the Media+ Discussion (T1) Treatment at the post-test stage was evident in pre-post test means (see Table 9.1).

Table 9.2:

F-values of ANCOVAs of ATDP, IDP and SEIPD in Treatment Groups

	Treatment group x Control	Time (pre-post)	Treatment group xTime
ATDP	5.93*	4.53	2.28
IDP	2.84	.01	.11
SEIPD	7.84**	.44	1.94

* $p < .05$, ** $p < .01$, *** $p < .001$

In regard to levels of self-efficacy toward future interactions with people with disabilities, scores on the SEIPD showed a significant main

effect after the treatment when compared to the control $F(3,68) 7.84, p < .01$ (see Table 9.2). Thus, the treatment groups had higher levels of self-efficacy toward future interactions with people with disabilities after the intervention. Further analysis is necessary to identify the effect of each intervention upon levels of self-efficacy.

These results confirm that the treatment groups had significantly higher levels of self-efficacy and more positive general attitudes toward people with disabilities after the intervention.

More stringent analysis, pairwise comparison with the control group, was undertaken to test changes in each treatment group after the treatment (pre and post-test) and when compared to the control group. This analysis enables testing of each hypotheses as discussed in the following section.

Pairwise comparison with control

The major focus of this stage of the study is upon measuring the effectiveness of different treatment methodologies in bringing about more positive attitudes, lowering discomfort in social interaction and raising self-efficacy, when compared to the control. Consequently, a pairwise comparison with the control group was undertaken to test the hypotheses formulated. The control and each experimental group were compared by more detailed repeated measure two-way ANOVAs. Treatment (experimental vs. control group) and Time (pre-test vs. post-test) were the between-and-within-group independent variables, whereas the ATDP, IDP, and SEIPD scores were the dependent variables in separate ANOVAs. The F-values of the ANOVAs are shown in Table 9.3.

A number of significant main effects were found, giving confirmation to the majority of hypotheses formulated. Significant Treatment x Time main effects on the ATDP scores were found for the Control vs Media +Discussion + Equal Status Peer treatment group (T1), $F(3,80) 4.47, p < .05$ and the Control vs Self-Efficacy Training group (T3), $F(3,80) 3.95, p < .05$ (see Table 9.3). Treatment effects (experimental group vs control) were also significant on ATDP scores for the Control vs Self-Efficacy Training group (T3). Two treatment groups (T1 and T3) became significantly more positive in their general attitudes toward people with disabilities as measured by the ATDP when compared to the Control (C1). These results give partial confirmation to **Hypothesis 11** as students in the T1 and T3 treatment groups became more positive in their general attitudes toward people with disabilities after the intervention and were also significantly more positive than the Control (C1). However, significant differences in level of discomfort in social interaction were not evident at a level of significance in T1, T2 or T3 intervention groups after the treatment. A possible reason for this is that the ATDP measures attitudes at a general level which are more open to change than attitudes on a more personal level, as measured by the IDP.

Table 9.3

F-values of ANOVAs of ATDP, IDP, and SEIPD by Treatment and Time

	Control vs Media+ Discussion+Peer	Control vs Media+ Discussion	Control vs Self- Efficacy Training
ATDP			
Treatment	.16	3.06	4.73*
Time	1.79	.10	1.39
Treatment X Time	4.47*	.30	3.95*
IDP			
Treatment	.58	6.02*	3.29
Time	.21	.04	.03
Treatment X Time	.06	.17	.26
SEIPD			
Treatment	17.45***	4.37*	15.61**
Time	2.06	2.84	1.86
Treatment X Time	3.93*	3.15	5.49*

* $p < .05$, ** $p < .01$, *** $p < .001$

Thus, **Hypothesis 12**, which predicted that all three experimental models (T1, T2 and T3) would be more effective in lowering levels of discomfort in social interaction than the control group (C1) remained unconfirmed. However, there was a significant main effect for Treatment (experiment vs control) in the Media +Discussion group

(T2) which showed significantly higher levels of discomfort in social interaction after the intervention, $F(3, 80) 6.02, p < .05$ (see Table 8.3). This result confirms **Hypothesis 15** which stated that the Media + Discussion treatment (T2) would not be as effective in lowering levels of discomfort in social interaction when compared with the other two treatments. Thus, the Media + Discussion group reported higher levels of discomfort in social interaction after the treatment, while the other two treatment groups (T1 and T3) remained similar. These findings support the proposition that this model of attitude change may lead to the polarisation of attitudes (e.g. Gottlieb, 1980).

There were a number of significant main effects evident for Treatment and Treatment \times Time interactions in regard to levels of self-efficacy as evidenced by scores on the SEIPD. All treatment groups (T1, T2 and T3) showed a significant main effect for SEIPD scores when compared to the Control (see Table 8.3). Furthermore, the Media+Discussion+Peer and the Self-Efficacy Training groups showed significant main effects for Treatment \times Time interactions when compared to the control (see Table 8.3) $F(3,80) 3.93, p < .05$ and $F(3,80) 5.49, p < .05$ respectively. Thus, subjects in the Media+ Discussion + Equal Status Peer (T1) and Self-Efficacy Training treatment (T3) had higher levels of self-efficacy toward future interactions with people with disabilities after the treatment and compared to the Control group (C1). These results give confirmation to both **Hypothesis 13** which predicted that the Self-Efficacy Training treatment (T3) would lead to higher levels of self-efficacy toward future interactions with people with disabilities compared to the control group and **Hypothesis 14**, which predicted that the Media+Discussion+Peer (T1), would lead to higher levels of self-efficacy than the control group C1) .

Discussion

The majority of hypotheses related to Stage II of the study were confirmed and a number of interesting findings emerged. The treatment groups, Media+Discussion (T2) + Equal Status Peer (T1) and Self-Efficacy Training (T3), became more positive in their general attitudes toward people with disabilities, while the control group became marginally less positive. There was a trend toward more positive attitudes in the T2 group although this was not at a level of significance. More stringent analysis using repeated measure two-way ANOVAs showed that the most significant increase in positive attitude as measured by the ATDP was in the Media+Discussion+Equal Status Peer (T1) and Self-Efficacy training (T3) groups. Thus, general attitudes, were influenced by self-efficacy training and by contact with an equal status peer. The importance of establishing interactions with equal status peers who are viewed as leading socially valued lives, is established by these findings. Such interactions, which are more personal in nature as compared to the use of media or instruction, may break down the barriers of difference between people with and people without disabilities, with common experience forming the basis of the development of positive attitudes.

Another interesting finding is the significance of self-efficacy training in bringing about positive attitude change toward people with disabilities. As this methodology has not been previously incorporated into empirical studies of attitude change these results are of note. Through the development of positive anticipatory scenarios and the use of cognitive simulation, role play and modelling (see Appendix 9.1) students became more positive in their attitudes toward people with

disabilities. Further empirical examination of models of attitude change incorporating similar methodologies is necessary.

The Media+Discussion treatment (T2) resulted in the weakest attitude shift of all three experimental models, as supported by the literature (e.g. Donaldson, 1980). However, the success of this intervention in bringing about positive attitude change gives strength to the assertion that positive media portrayal of people with disabilities in socially valued roles along with structured discussion (see Appendix 9.1) can lead to positive attitude change. It must be noted, however, that the attitude shift was weaker than the other two treatment groups and may diminish over time, suggesting the need for long-term follow up. This finding has implications for the development of media campaigns aimed at changing attitudes toward people with disabilities.

The successful outcome of all treatments in bringing about positive attitude change supports the development and implementation of structured intervention programs with undergraduate student groups. It was particularly notable that positive change was effected in a group who exhibited pre-existing negative attitudes and expressed strong fear and anxiety regarding future interactions with people with disabilities.

Further evidence of the success of the self-efficacy training methodology lies in the confirmation of the hypothesis predicting subjects would have higher post-test levels of self-efficacy after the intervention when compared to the control. This finding is supported by literature asserting that self-efficacy expectations regarding future effective interactions with people with disabilities constitute an important cognitive dimension in attitude formation (Fichten & Amsel, 1986; Amsel & Fichten, 1988). A relationship between the

thoughts of a person regarding interactions with people with disabilities, level of comfort and self-efficacy beliefs is posited. It follows that weak self-efficacy expectations regarding interactions are related to discomfort, lack of knowledge about appropriate behaviour and negative attitudes toward people with disabilities (Fichten & Amsel, 1986; Amsel & Fichten, 1988). As previous empirical validation of this assertion is not evident in related research, the significant change in level of self-efficacy is especially noteworthy. Furthermore, evidence that the development of positive scenarios, role play and modelling is a powerful intervention leading to strengthened self-efficacy beliefs toward future interactions with people with disabilities, is an important outcome of this study.

The validity of these findings are further strengthened as the T3 treatment group not only reported a rise in level of self-efficacy toward future interactions with people with disabilities but also displayed more positive general attitudes after the intervention. These results support the assertion that self-efficacy is a mediating variable in the development of positive attitudes toward people with disabilities. The shift in attitude and strength of self-efficacy in a group displaying such negative attitudes toward people with disabilities is a strong rationale for the inclusion of similar strategies within undergraduate nursing courses. These findings warrant both an acknowledgment of the fears and self-doubt exhibited by nursing students and the development of strategies to address these concerns.

Also of note is the highly significant rise in level of self-efficacy after the T1 (equal status contact) treatment. This finding gives further strength to the inclusion of contact with peers with a disability in programs of attitude change. The isolation of equal status contact as an

influential variable influencing strength of self-efficacy is of particular note. Evidence for this is strong, as the T1 treatment group replicated the T2 group, apart from the contact component, yet did not experience a similar rise in level of self-efficacy. Thus, the personal interaction undertaken with an equal status peer with a disability, even across a short time span, was a strong enough driving force to overcome students' previously reported fears and anxieties regarding future interactions with people with disabilities.

These findings further support the consideration of including methodologies aimed at developing self-efficacy within curricula and programs of attitude change. In particular, the inclusion of contact with a peer with a disability may be a strong driving force toward strengthened levels of self-efficacy and positive attitudes.

A concerning finding was the increase in level of discomfort in social interaction reported in the Media+Discussion group (T2) across the pre-post test period. This result supports the assertion evident in the literature, that discussion and media presentations alone may lead to higher levels of discomfort in social interaction as cautioned in the literature (Wright 1980, 1988). This is of particular note as a Media+Discussion model is commonly incorporated within education and training curricula, particularly in undergraduate nursing programs. It is possible that the implementation of this methodology leads to a polarisation of previously held attitudes as suggested in the literature (e.g. Wright, 1988) with a group who hold negative attitudes toward people with disabilities becoming even more negative after discussion. It is also possible that when students see people with disabilities portrayed in the media, they are overwhelmed with the differences rather than similarities to themselves. It follows that they

may feel relief that they do not have a disability and, not having had personal positive contacts, may still be taking an 'outsiders' perspective (e.g. Wright, 1980).

Although this treatment was effective in bringing about positive attitude change it is possible that the significant increase in level of discomfort in social interaction would mediate this effect once interaction with people with disabilities took place. This possibility must be considered in the development of coursework and related clinical placement in the disability area. The nature of students' contacts with people with disabilities is a critical issue. Placements which incorporate 'quality' contacts, that is those which lessen levels of discomfort in social interaction, are more likely to lead to positive attitudes. Moreover, as previously suggested, students fears and concerns regarding interactions with people with disabilities must be acknowledged and supported.

A surprising finding were the few differences evident in post-test levels of discomfort in social interaction across all treatment groups. This result suggests that the construct 'strain in social interaction' is influenced by factors broader than those within the experimental interventions alone. It is possible that direct positive contact with people with disabilities is the major variable or driving force influencing level of strain or discomfort in social interaction. Related literature suggests that contact which is structured and direct between equal status peers who lead socially valued lives will lead to more positive attitudes (e.g. Rees, Spreen & Harnadek, 1991; Lyons, 1990). Thus, it is possible that without direct positive contacts, level of discomfort in social interaction may remain too strong a barrier to change by artificial intervention alone. Further research is necessary to

empirically investigate this assertion. However, some support is given to this assertion from an analysis of results of Stage I of the study which report that levels of discomfort in social interaction decreased with positive contact experiences (driving force) and increased with negative contact (restraining force) experiences. The strength of nursing students' anxieties, particularly those related to fear of physical harm and inability to communicate with people with disabilities, as reported in Chapter 6, may be a strong restraining force maintaining and perpetuating negative attitude.

Thus, although levels of self-efficacy regarding future interactions with people with disabilities were strengthened and mediated in the development of positive general attitudes (as measured by the ATDP), students' level of discomfort in social interaction (as measured by the IDP) remained high. For change to take place across a short term intervention the inclusion of direct contact with people with disabilities may be necessary. This suggests the need for alternative methodologies which lessen levels of discomfort in social interaction in a group with pre-existing fears and anxieties. It also suggests the need for further research which accounts for the different attitude constructs measured by individual measures.

In conclusion, it must be noted that all three treatments were successful in bringing about limited positive attitude change. This supports the assertion that interventions using the range of methodologies employed are an effective method of attitude change within an initially negative population, such as nursing students. In particular, the treatments incorporating contact (T1) and self-efficacy training (T3) are most effective in strengthening self-efficacy and lead

to more positive attitudes toward people with disabilities as measured by the SEIPD and the ATDP respectively.

The ramifications of these findings for future curriculum development in nurse education/training programs are widespread. Results reported in previous chapters, support the assertion that the inclusion of a mandatory disability component alone is not sufficient to bring about positive attitude change toward people with disabilities. Structured sessions such as those employed in the experimental design of this study, in particular self-efficacy training and contact with equal status peers with a disability, need to be considered. Moreover, curricula must incorporate a range of instructional strategies and include contacts with people with disabilities whose lifestyle is viewed as having social value.

Implications for the organisation of clinical placements for nursing students are evident. The strength of the T1 treatment (i.e. incorporating equal status peer contact) in leading to positive attitudes and strengthening self-efficacy, suggests that the practicum component of disability units must be carefully structured to include interactions with people of equal status who are viewed as leading socially valued lives. These interactions could take place in a variety of environments including formal settings, such as service-based placements, peak and advocacy groups and informal settings, such as community leisure and recreation facilities.

Although the media and discussion intervention resulted in a shift toward positive attitudes, a significant rise in level of discomfort in social interaction was also evident. Hence, the implementation of this model as a lone methodology must be questioned. It is possible that

any lowering of discomfort in social interaction requires the strong driving force of direct contact within an equal status, socially valued environment. It is also evident, from the results of Stage I of the study, that discomfort in social interaction is mediated by both strength of self-efficacy beliefs and positive contact experiences.

Overall, results from this experimental study suggest that equal status contact is the most influential variable leading to positive attitudes, high levels of self-efficacy regarding future interactions and lower levels of discomfort in social interaction with people with disabilities. Recent studies which highlight the need for educational curricula to take account of students' attitudes and facilitate valued social role contact with people with disabilities, support this assertion (Lyons, 1990). Moreover, studies examining attitudes toward a range of diverse groups, such as homosexuals and various ethnic groups, have found that equal status interactions are a pre-requisite to the reduction of prejudice (Gaertner, Mann, Dovidio, Murrell & Pomare, 1990; Fiske & Ruscher, 1992).

Thus, the importance of including and promoting equal status interactions with people with disabilities in undergraduate nurse education programs cannot be overstated. Not only will the promotion of a socially valued, positive portrayal of people with disabilities influence the quality of services provided by professionals such as nurses, it will further enhance true community integration.

Summary of results

The three treatment groups and the control were compared by repeated measure two-way ANOVAs on pre-and post-test scores. Results were interpreted cautiously due to relatively small sample

sizes. Results showed that treatment groups T1 and T3 were more effective in bringing about positive attitude change than the control group, giving partial confirmation to Hypothesis 11. Hypothesis 13 was confirmed when the self-efficacy training treatment (T3) led to higher levels of self-efficacy compared with the control. Hypothesis 14, which predicted that the Media+Discussion+Equal status peer treatment (T1) would lead to higher levels of self-efficacy than the control was also supported by the data confirming the strength of the inclusion of an equal status peer in treatment T1, leading to more positive general attitudes and significantly higher levels of self-efficacy than the treatment T2. Hypothesis 15, which predicted that the Media + Discussion treatment (T2) would not be as effective in lowering levels of discomfort in social interaction compared to the other two treatments (T1 and T3) was also confirmed with a significant rise in level of discomfort in the T1 treatment group. Hypothesis 12, that all three experimental treatments would lead to lower levels of discomfort in social interaction than the control remained unconfirmed.

The following chapter outlines the major implications and recommendations of the study as proposed and discussed in this chapter and the preceding chapter which discussed the results of Stage I of the study.

CHAPTER 10: CONCLUSIONS AND RECOMMENDATIONS

Introduction

This longitudinal study, which examines two sub-populations of undergraduate students across a three year period, provides a rich source of data related to attitude formation and change toward people with disabilities. The concurrent investigation of nurse and teacher education students assists in an identification of issues for each professional group.

This chapter discusses the major implications of the study across education, policy and research contexts. It makes recommendations for both policy and curricula development and implementation, and for future research initiatives. Ramifications for service providers and those involved in the development of programs of attitude change are also discussed.

Findings from this study are of current significance due to recent legislative enforcement of specific standards of service delivery to people with disabilities (Disability Services Act, DSA, NSW, 1993), Australian disability discrimination legislation (Federal Disability Discrimination Act, 1993) and the NSW Department of School Education edict that all graduate teachers must complete a mandatory unit in special education to be eligible for employment from the beginning of 1994 (Boston, 1994). Contemporary philosophies and practices of community integration and inclusive education, give further weight to the findings, implications and recommendations discussed in this chapter.

Recommendations and implications for undergraduate teacher education

The finding that teaching students become more positive toward people with disabilities, more efficacious regarding future professional interactions, along with reported willingness to teach students with disabilities in their classrooms and expressed interest in undertaking post-graduate study in special education, is of note, although some caution must be applied as the mandatory unit is not a unitary variable. However, the importance of achieving positive teacher attitudes as the first step toward the successful integration of students with disabilities, cannot be overstated.

As little research has been undertaken since the recent inclusion of mandatory units in special education in undergraduate teacher education courses in NSW, the positive outcome of this initiative is a significant finding with major curriculum and policy implications. A number of recommendations to existing policy guidelines are evident from an analysis of the qualitative data, as outlined below.

i. The need for inclusion of a practicum component to be run concurrently with the mandatory unit.

This recommendation is suggested by findings reporting dissatisfaction of teaching students regarding the limited amount of contact they experienced with students with disabilities. Implementation of this recommendation would enable students to implement effective teaching strategies discussed in lectures and tutorials. Even contact of one day per week would assist students to achieve initial levels of competence in teaching diverse groups. Students could complete assignments which

focus on strategies of effective integration under the supervision of classroom teachers. This recommendation is supported by recent research suggesting that direct and controlled contact is a critical variable in positive attitude formation of undergraduate teaching students (e.g. Strong & Shaver, 1991; Eichinger, Rizzo & Sirotnick, 1992). Existing policy guidelines developed by the Department of School Education need to be revised as they do not include strong recommendations regarding the role of the practicum in teaching about disability.

- ii. **Consideration should be given to the inclusion of curriculum content related to effective methods of communication with students and people with disabilities.**

Teaching students reported major concerns regarding their inability to communicate effectively with people with disabilities. Their concerns focused on their lack of skill in communication and their fear of patronising or insulting people with disabilities. To overcome these fears, strategies and skills in communication with people with disabilities could easily be incorporated into curriculum content, resulting in feelings of competence and greater ease in interactions.

- iii. **The need for similar policy initiatives to be implemented by the non-government school education sector.**

At present, beginning teachers employed in the independent and non-government education sectors are not required to undertake study in special education. As the integration of students with disabilities and learning difficulties has been common practice in all systems of education for many years, there is a clear need for the implementation of similar policy initiatives.

Recommendations and implications for undergraduate nurse education

The shift toward more negative attitudes in nursing students after completion of the initial mandatory disability unit and related contact has major implications for models of curriculum development and implementation.

Results of the present study suggest that the critical factors in ensuring positive attitudes toward people with disabilities are the nature of the interaction and the nature of the environment in which that interaction takes place. Related policy implications include the organisation of practicum, the adequate support and preparation of students, the need for appropriate curriculum content along with a review of theoretical models of disability presented in nursing curricula. A number of recommendations for curriculum development in undergraduate nurse education courses arise from the present study. Each recommendation is discussed below.

- i. The development of curricula which addresses the variety of ways communication between people with and without disabilities can be enhanced and supported.**

Reported concerns of nursing students regarding possible challenging behaviour on the part of people with disabilities and perceived difficulties in communication are asserted to be a strong restraining force maintaining and perpetuating negative attitude. Formally addressing these concerns through the development of curricula which includes both theoretical and practical application will enable students to feel confident in their interactions with people with disabilities. Specific strategies for interaction, including alternative and augmentative communication systems

and an understanding of behaviour as an expression of communication, are critical pre-requisites to lessening fear and encouraging consequent positive interaction.

- ii. **The inclusion of strategies which strengthen self-efficacy and promote a positive view of life with a disability into related curricula.**

Although caution must be applied to the relationship between attitude change and the implementation of specific curricula, the success of the experimental interventions included in this study, particularly those incorporating self-efficacy training and interaction with an equal-status peer, supports this recommendation. Although nursing students expressed strong negative attitudes toward people with disabilities prior to the intervention, they became significantly more positive on its completion. Similar methodologies could easily be incorporated into undergraduate nursing courses within behavioural science or communication units.

- iii. **The inclusion of a critique of service provision to people with disabilities within related curricula.**

Although it cannot be strongly substantiated, the influence of specific practicum experiences on nursing students levels of self-efficacy (as discussed in the previous chapter) requires an acknowledgement of the importance of positive placement experiences. Due to the nature of current service delivery this is difficult to ensure. It is possible that students may experience placements which are not models of 'best practice'. An understanding of current philosophies, policies and practices of

service provision are necessary for students to assess and critique the particular service in which they are placed. The inclusion of curricula addressing processes of transition and the management of change would assist students' in their assessment of current service practice.

iv. Adequate preparation of students for future interactions with people with disabilities which acknowledges and supports their fears and anxieties in a realistic and practical manner.

The results of this study call for a major reconceptualisation of the organisation and delivery of practicum placements for nursing students. The development of policies which prepare students prior to, during and after disability-related practicum is a major recommendation of the present study. The amelioration of students' fears and concerns is a pre-requisite to lessening discomfort in interaction and ensuring positive attitudes toward people with disabilities. The concept and practice of reflection may be a useful tool to incorporate within practicum policy, giving students the opportunity to discuss and consider their practicum experiences, dissipate anxieties and establish the nexus between theory and practice. The use of scenario-based experiential learning, such as that included in the self-efficacy intervention, may be one useful strategy.

v. The need for a broader range of placement experiences, with focus on community-based services for people with disabilities.

Analyses of the range of placement environments experienced by nursing students show that they are narrowly focussed and are biased toward segregated settings. Placements in community-

based organisations such as integrated pre-schools, early intervention centres, supported accommodation services, employment services and community options programs would more adequately reflect current philosophies of community-based service provision. These services, through their emphasis on community integration and the rights of individuals, embody and reinforce the belief that people with disabilities are valued members of society. While placements in institutional settings may reflect one reality of service provision, due recognition must be given to both the continuum of service provision, and contemporary service practice. The importance of the environment in influencing attitude is evidenced by the findings of the present study and by assertions in related literature that contact in places of employment, schools and social settings are more likely to effect positive attitudes than contact in medically oriented settings such as hospitals and institutions (Wright, 1980, 1988; Yunker, 1988).

- vi. **More active involvement of service providers and consumers in the development of the practicum component of disability-related courses to ensure quality placement experiences and supportive supervision.**

While the initiation of more formalised collaboration between universities and industry has historically come from the former institutions, service providers need to reconsider their role as critical stakeholders in the process of ensuring quality outcomes for consumers. People with disabilities who are service consumers also need to be involved in this collaborative process at more than just a token level. The facilitation of working

parties, conferences and workshops involving staff from the university and staff from a range of disability services, consumers and their advocates, may assist in the development of appropriate advisory bodies and support networks. Involving staff from disability services and consumers of the service in both the development of curricula and the direct provision of information to students may initiate and consolidate the process of ongoing collaboration.

vii. A review of theoretical models of disability currently underpinning undergraduate nurse education curricula.

The dissonance between a bio-medical model with a focus on aetiology, illness and cure, and a socio-political model with a focus on human rights and the social construction of disability, is reflected in both the literature (e.g. Rioux & Bach, 1994) and the findings of the present study. It is clear that nursing students see their role as having a strong caring and curative orientation, as evidenced from their role descriptions (see Chapter 7). The possibility that nursing students feel dissonance regarding their identity and role in the disability field must be acknowledged and addressed. Also, findings of the present study suggest that nursing students take an 'outsiders' perspective of people with disabilities, based on a succumbing view of life with a disability as (Wright, 1983, 1988). It is not surprising, then, that they view people with disabilities as different or deviant and remain fearful of future interactions. In this sense, nurse education curricula may be inadvertently reinforcing and perpetuating a labelling perspective of disability, rather than introducing them to a socio

political perspective which acknowledges the rights of people with disabilities and accords them a valued social role. Contemporary philosophies of community inclusion and habilitation do not fit within a medically oriented model. It is critical that current philosophies and practices of service provision and current theoretical models of disability are reflected within undergraduate nursing curricula.

These recommendations challenge the inclusion of 'disability' as a discrete entity in undergraduate nurse education programs. This is not to suggest that nurses do not need to learn about people with disabilities. It is acknowledged that nurses interact with people with disabilities across the generic hospital system and in speciality nursing fields. The need for nursing students to learn about people with disabilities has become more urgent with the move toward accessing generic health care services as an outcome of community integration. Questions of what undergraduate nursing students need to know about people with disabilities, and how this is best incorporated into their curriculum, need to be answered. Consideration should also be given to the possibility that integration of the previously discrete area of developmental disability into the general undergraduate nursing curriculum may lead to this area being overlooked due to time constraints or lack of commitment. As all nurses need to consider issues related to working with people with disabilities, this is of concern. The possibility of this outcome, and the question of where disability-related content is best placed, calls for open debate and discussion of these issues as a prerequisite to any curriculum or policy review.

The most appropriate form of professional training for nurses who wish to maintain a speciality in the disability area must also be addressed. It is evident from the findings of this study, that most beginning nurses are not interested in pursuing a career in the disability field or in undertaking related post-graduate study. This suggests that the undergraduate arena is perhaps not the most appropriate place to specialise in a disability-oriented profession, and that nursing alone is not an appropriate base-level professional qualification. It is possible that post-graduate courses with a broader base, which focus on the community integration of people with disabilities from a socio-political, rather than a medical perspective, would give nurses a more appropriate theoretical background and wider career options than previously afforded.

Implications and recommendations for future research

A range of implications and recommendations for future research initiatives are evidenced from the findings of the study. These include implications related to the development of community or service-based programs of attitude change.

i. The need to monitor and empirically evaluate the outcome of attitude change campaigns.

The finding that the intervention incorporating presentation of information, media and discussion resulted in the weakest attitude shift and a significant rise in students' reported discomfort in social interaction, has ramifications for the development of programs and campaigns using similar methodologies. Media campaigns are commonly employed by services and advocacy groups as a major strategy of attitude change, yet little formal evaluation of the outcome of these

programs is undertaken. Thus, this recommendation is critical as programs currently implemented are likely to be costly and may not unequivocally result in positive attitude change.

ii. Further administration of the self-efficacy measure (SEIPD) in a range of similar studies.

One of the strengths of this study lies in its examination of both the affective and cognitive dimensions of attitude. Previous research has tended to focus solely on the cognitive dimension of attitude, ignoring the importance of affect (Shaver, Curtis, Jesunathadas & Strong, 1989). The development of a tool to measure self-efficacy and the reported influence of self-efficacy as a variable mediating attitude change have implications for future attitude research. Moreover, the success of the self-efficacy training intervention suggests that similar methodologies could be effectively implemented across a relatively short time span, with groups reporting negative attitudes toward people with disabilities. It is possible that the construct of self-efficacy encapsulates the fears and anxieties expressed by nursing students regarding future interactions with people with disabilities. Ongoing administration of the author constructed measure of self-efficacy toward future interaction with people with disabilities (SEIPD) in studies of attitude change would test further the role of self-efficacy as a mediating variable between attitude change and behaviour.

iii. Further research which examines the relationship between a variety of attitude instruments.

The present study establishes a number of relationships between previously established attitude instruments and those developed

by the author for the purposes of this study. Measures of attitude toward people with disabilities purport to measure attitudes on a range of levels (e.g. the IDP purports to measure attitudes on a social level), yet there is limited empirical evidence supporting these assertions. Further research is necessary in order to examine the constructs that attitude measures have in common, how they differ and what are the critical variables underlying attitudes toward people with disabilities.

iv. Ongoing empirical examination of the different forms of contact with people with disabilities.

A further finding of this study, with implications for future research is the isolation of three forms of contact with people with disabilities: social, community and professional (see Chapter 6). Social and community contacts are posited as those in which interactions are of a more personal nature, such as interactions with family, friends, acquaintances and members of the community. On the other hand, professional contacts, such as those between nurses and patients, are more likely to have an unequal status dimension eliciting different types of interactions and resultant attitudes. The specific nature and influence of professional interactions on attitude formation is isolated and tested in the study. Results give substantial support to the proposition that professional contact is an influential variable in the formation of attitudes toward people with disabilities. It is suggested that the (SEIPD) taps this dimension of professional contact (see Chapter 4). Future research which isolates and examines different forms of contact with people with disabilities

may assist in the identification of variables influential in attitude formation and change.

v. Future research focusing on the development and implementation of models of disability-related practicum.

An empirical examination of a range of models of practicum upon students' attitudes toward people with disabilities would inform policy and related curriculum development. The comparison of different structures for teaching students, such as one day per week versus a three week block, and different environments for nursing students, such as community-based versus institutional placements, would assist in the development of best models of practicum.

vi. Research which examines the most appropriate theoretical model of disability, particularly in nurse education curricula.

A comparative study examining the efficacy of different theoretical models of teaching about disability would assist in the development of curricula. Little work has been undertaken in this area, yet a variety of models including holistic, bio-medical, socio-political and educative approaches are commonly incorporated in programs of nurse education both locally and internationally (Roberts, 1991; Brillhart, Jay & Wyers, 1990; Ang, 1992). A qualitative study which looked at outcomes of specific models of teaching about disability, would be useful for those involved in curriculum development and would have positive long term outcomes for people with disabilities.

vii. A stronger focus on qualitative research to support quantitative findings of attitude change toward people with disabilities.

Historically, the vast majority of research into attitude change toward people with disabilities has taken a quantitative approach. Qualitative studies incorporating interviews with all parties including students, practicum supervisors and people with disabilities are needed to further account for findings related to attitude formation and change. It is recommended that research includes actual observations of teaching and nursing students' interactions with people with disabilities in order to collect evidence on behavioural changes. Consideration of ethical issues regarding informed choice and maintenance of privacy would need to be addressed.

viii. Replication of the present study with nursing and education students in other universities.

Replication of the present study is necessary to further validate findings by testing their generalisability and to establish the best model of mandatory disability study, related practicum and strategies of attitude change.

In conclusion, it is recommended that mandatory study in special education be implemented as policy across all systems of teacher education. It is cautioned, however, that this recommendation is not used as a rationale for the discontinuation of postgraduate studies in special education or integration. The reports of teaching students that they need specific skills and competencies to teach students with disabilities and their high the level of interest in undertaking post-graduate study in special education or integration, suggest an ongoing need for post-graduate offerings.

Implications and recommendations specific to nursing students are also apparent. Although the inclusion of mandatory disability units in undergraduate nurse education courses did not lead to positive attitude change, it is important to not assume that nursing students will show prejudice in their interactions with people with disabilities. Söder (1990) cautions attitude researchers not to equate negative attitude measured on existing attitude measures with prejudice toward people with disabilities. Results of analyses of both quantitative and qualitative data clearly suggest that negative attitudes of nursing students are a reflection of their 'fear of the unknown' and their belief in the myth that people with disabilities are 'deviant'. These findings are notable in their support of theoretical explanations of disability which take a labelling or deviance perspective (e.g. Goffman, 1968; Wright, 1983; Oliver, 1990). It is of concern that the mandatory disability unit did little to alleviate nursing students' fears regarding their future interactions with people with disabilities. The need to re-examine both the theoretical model and practicum component of mandatory disability units, so that a labelling or deviance perspective is not perpetuated, is a major recommendation of the present study.

The results of this study challenge those involved in the development of policy, curricula and programs of attitude change, to closely monitor, evaluate and review their activities. While the 1990s may be viewed as an era of awareness and advancement of the human rights of people with disabilities, it is both naive and politically expedient to assume that positive attitudes are an automatic outcome of either social or legislative change. While legislation can require specific practices, it is asserted in current discourse that attitudes remain the most powerful barrier to equality (Stern, 1993; Druett, 1994).

Results of the present study also challenge complacency regarding assumptions about positive attitude formation and call for a re-examination of policy and practice within both educational and wider community contexts. Community attitudes toward people with disabilities remain a major barrier to acceptance (Pederson & Carlson, 1981), with attitudes of professionals, such as nurses and teachers, asserted to be powerful determinants of successful integration and quality service provision (Chow, 1991; Lindgren & Oermann, 1993). Thus, it is imperative that the study of attitudes toward people with disabilities remains prominent on the research agenda. It is also critical that attitude research does not become a purely academic exercise. For research to inform and challenge previous policy and practice, it must be made accessible to all stakeholders and be accompanied by related recommendations for policy development and implementation. Until any complacency related to positive attitude formation is addressed, philosophies of egalitarianism, humanitarianism and social justice will remain rhetoric, and people with disabilities will continue to be marginalised and devalued.

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APPENDICES

Appendix 4.1**Stage I: Consent Form****Study on Attitude formation and change toward people with disabilities**

I am undertaking a study into the formation of students' attitude toward people with disabilities. The study involves three phases of data collection across Year 1, 2 and 3 of your enrolment. You will be asked to fill out a questionnaire and a number of attitude scales. This will take place during tutorial time and will take no longer than half an hour. You do not have to put your name on any of the questionnaires and you will not be identified at any time. The results of the study will be used to recommend changes to curriculum and practicum content of courses in developmental disability and special education. They will also be of interest to those involved in policy development and to people with disabilities and their advocates. Results of the study can be made available to you on request.

If you agree to be involved in the study across years 1-3 of your enrolment please sign below.

Thankyou,

Fay Hickson,

Lecturer, Department of Professional Development

I undertake to participate in the study of attitude formation and change toward people with disabilities , Stage I, as described above

Name _____

Signature _____

Appendix 4.2
Stage II Consent Form

Study on attitude formation and change toward people with disabilities

I am undertaking an experimental study of attitude change toward people with disabilities. I am testing a variety of intervention models which aim to bring about more positive attitudes toward people with disabilities. I am asking students to participate in this study so we can gain a better understanding of how people form their attitudes. Students will be randomly allocated to groups within usual tutorial time. Sessions will be of three hours duration and will run for three weeks. You will not be advantaged or disadvantaged in any way from participating in this study. Results of the study can be made available to you on your request. Please sign the consent form below if you wish to participate in the study

Thankyou

Fay Hickson,

Lecturer, Department of Professional Development

I undertake to participate in the experimental study on attitude formation and change toward people with disabilities, Stage II, as described above

Name _____

Signature _____

Appendix 4.3 Attitude Toward Disabled Persons Scale (ATDP) Form 0

Here is a list of statements that some people have said describe how they feel when they have contact with a person with a disability. Of course, how we respond to people depends on how well we know them as individuals. However, we would like to know how you feel in **general** when you met a person with a disability. Please read each statement carefully and decide how much it describes how **you** feel.

Please place **one** tick next to the question under the column that describes how you usually feel.

I disagree very much.	I disagree somewhat.	I disagree a little.			I agree a little.	I agree somewhat.	I agree very much.
			1	It is rewarding when I am able to help.	1		
			2	It hurts me when they want to do something and can't.	2		
			3	I feel frustrated because I don't know how to help.	3		
			4	Contact with a disabled person reminds me of my own vulnerability.	4		
			5	I wonder how I would feel if I had this disability.	5		
			6	I feel ignorant about disabled people.	6		
			7	I am grateful that I do not have such a burden.	7		
			8	I try to act normally and to ignore the disability.	8		
			9	I feel uncomfortable and find it hard to relax.	9		
			10	I am aware of the problems that disabled people face.	10		
			11	I can't help staring at them.	11		
			12	I feel unsure because I don't know how to behave.	12		
			13	I admire their ability to cope.	13		
			14	I don't pity them.	14		
			15	After frequent contact, I find I just notice the person not the disability.	15		
			16	I feel overwhelmed with discomfort about my lack of disability.	16		
			17	I am afraid to look at the person straight in the face.	17		
			18	I tend to make contacts only brief and finish them quickly as possible.	18		
			19	I feel better with disabled people after I have discussed their disability with them.	19		
			20	I dread the thought that I could eventually end up like them.	20		

Appendix 4.4 Interaction With Disabled Persons Scale (IDP)

Mark each statement in the left margin according to how much you agree or disagree with it. Please mark every one. Write +1, +2, +3: or -1, -2, -3: depending on how you feel in each case.

+3: I agree very much.
 +2: I agree pretty much.
 +1: I agree very little.

-1: I disagree a little.
 -2: I disagree pretty much.
 -3: I disagree very much.

1	Parents of disabled children should be less strict than other parents.
2	Physically disabled persons are just as intelligent as nondisabled people.
3	Disabled people are usually easier to get along with than other people.
4	Most disabled people feel sorry for themselves.
5	Disabled people are the same as anyone else.
6	There should not be special schools for disabled children.
7	It would be best for disabled persons to live and work in special communities.
8	It is up to the government to take care of disabled persons.
9	Most disabled people worry a great deal.
10	Disabled people should not be expected to meet the same standards as nondisabled people.
11	Disabled people are as happy as nondisabled ones.
12	Severely disabled people are no harder to get along with than those with minor disabilities
13	It is almost impossible for a disabled person to lead a normal life.
14	You should not expect too much from disabled people.
15	Disabled people tend to keep to themselves most of the time.
16	Disabled people are more easily upset than nondisabled people.
17	Disabled persons cannot have a normal social life.
18	Most disabled people feel that they are not as good as other people.
19	You have to be careful of what you say when you are with disabled people.
20	Disabled people are often grouchy.

Appendix 4.5

Self-Efficacy Toward Future Interactions with People with Disabilities SEIPD (Teaching Students)

Please answer the following questions about future professional interactions with people with disabilities by circling the most appropriate statement

1. I feel confident in my ability to teach students with disabilities

I _____ I _____ I _____ I _____ I _____ I _____ I _____ I _____ I
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

2. I am able to provide individuals with appropriate programs

I _____ I _____ I _____ I _____ I _____ I _____ I _____ I _____ I
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

3. I can adapt my practices to suit individual needs

I _____ I _____ I _____ I _____ I _____ I _____ I _____ I _____ I
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

4. I do not feel in control of any unforeseen situation that may arise during any interaction

I _____ I _____ I _____ I _____ I _____ I _____ I _____ I _____ I
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

5. I am confident that I will quickly lose any fear or apprehension

I _____ I _____ I _____ I _____ I _____ I _____ I _____ I _____ I
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

6. I do not feel competent in relation to my skills in this area

I _____ I _____ I _____ I _____ I _____ I _____ I _____ I _____ I
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

7. When individuals progress it is due to the input I have made

I _____ I _____ I _____ I _____ I _____ I _____ I _____ I _____ I
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

8. When confronted with a challenging situation I would be likely to give up

I _____ I _____ I _____ I _____ I _____ I _____ I _____ I _____ I
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

9. I am able to plan and organise appropriate activities for students with disabilities in my class

I _____ I _____ I _____ I _____ I _____ I _____ I _____ I _____ I
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

10. I am able to attain any goals I set for myself in this area of work

I _____ I _____ I _____ I _____ I _____ I _____ I _____ I _____ I
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

11. I have a low expectation of my performance in this area

I _____ I _____ I _____ I _____ I _____ I _____ I _____ I _____
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

12. I do not look forward to the next time I teach students with disabilities

I _____ I _____ I _____ I _____ I _____ I _____ I _____ I _____
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

13. It is rare that I feel failure and frustration when working in this area

I _____ I _____ I _____ I _____ I _____ I _____ I _____ I _____
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

14. These students benefit greatly from my interactions with them

I _____ I _____ I _____ I _____ I _____ I _____ I _____ I _____
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

15. I see my future interactions with people with a disability as successful

I _____ I _____ I _____ I _____ I _____ I _____ I _____ I _____
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

Appendix 4. 6

Self-Efficacy Toward Future Interactions with People with Disabilities (SEIPD) Nursing Students

Please answer the following questions about future professional interactions with people with disabilities by circling the most appropriate statement

1. I feel confident in my ability to work with people with a disability

I _____ I _____ I _____ I _____ I _____ I _____ I _____ I _____ I
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

2. I am able to provide individuals with appropriate programs

I _____ I _____ I _____ I _____ I _____ I _____ I _____ I _____ I
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

3. I can adapt my practices to suit individual needs

I _____ I _____ I _____ I _____ I _____ I _____ I _____ I _____ I
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

4. I do not feel in control of any unforeseen situation that may arise during any interaction

I _____ I _____ I _____ I _____ I _____ I _____ I _____ I _____ I
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

5. I am confident that I will quickly lose any fear or apprehension

I _____ I _____ I _____ I _____ I _____ I _____ I _____ I _____ I
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

6. I do not feel competent in relation to my skills in this area

I_____I_____I_____I_____I_____I_____I_____I_____I
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

7. When individuals progress it is due to the input I have made

I_____I_____I_____I_____I_____I_____I_____I_____I
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

8. When confronted with a challenging situation I would be likely to give up

I_____I_____I_____I_____I_____I_____I_____I_____I
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

9. I am able to plan and organise appropriate activities for clients with disabilities

I_____I_____I_____I_____I_____I_____I_____I_____I
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

10. I am able to attain any goals I set for myself in this area of work

I_____I_____I_____I_____I_____I_____I_____I_____I
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

11. I have a low expectation of my performance in this area

I _____ I _____ I _____ I _____ I _____ I _____ I _____ I _____ I
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

12. I do not look forward to the next time I work with people with a disability

I _____ I _____ I _____ I _____ I _____ I _____ I _____ I _____ I
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

13. It is rare that I feel failure and frustration when working in this area

I _____ I _____ I _____ I _____ I _____ I _____ I _____ I _____ I
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

14. These clients benefit greatly from my interactions with them

I _____ I _____ I _____ I _____ I _____ I _____ I _____ I _____ I
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

15. I see my future interactions with people with a disability as successful

I _____ I _____ I _____ I _____ I _____ I _____ I _____ I _____ I
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

Appendix 4. 7 Mandatory Contact Scale MCS (Teaching Students)

Please answer the following questions which relate to the school experience with a child with a disability you have named as the one you **remember most clearly** by **circling the scale at the appropriate point**

1. I found this interaction a positive experience

I _____ I _____ I _____ I _____ I _____ I _____ I _____ I _____
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

2. I received minimal support and guidance from my university lecturer

I _____ I _____ I _____ I _____ I _____ I _____ I _____ I _____
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

3. The specific area in which I spent most time was a positive environment for students

I _____ I _____ I _____ I _____ I _____ I _____ I _____ I _____
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

4. I found it difficult to interact easily with students with disabilities

I _____ I _____ I _____ I _____ I _____ I _____ I _____ I _____
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

5. I found this integration experience to be rewarding

I _____ I _____ I _____ I _____ I _____ I _____ I _____ I _____
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

6. Information gained from the P.S.U.III unit (Lectures & tutorials) was of great benefit to me

I_____I_____I_____I_____I_____I_____I_____I_____I
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

7. The students I met in this school do not lead a rewarding or fulfilling life

I_____I_____I_____I_____I_____I_____I_____I_____I
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

8. Any feelings I had of anxiety or uneasiness quickly disappeared

I_____I_____I_____I_____I_____I_____I_____I_____I
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

9. This school experience was not one of the best I have had

I_____I_____I_____I_____I_____I_____I_____I_____I
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

10. I was given appropriate feedback from my lecturer in relation to my interaction with students with disabilities

I_____I_____I_____I_____I_____I_____I_____I_____I
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

11. I did not feel relaxed and comfortable in this work environment

I _____ I _____ I _____ I _____ I _____ I _____ I _____ I _____ I
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

12. Successful interactions with students with disabilities occurred often and over lengthy periods

I _____ I _____ I _____ I _____ I _____ I _____ I _____ I _____ I
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

13. This placement enhanced my knowledge and understanding of the area of disability

I _____ I _____ I _____ I _____ I _____ I _____ I _____ I _____ I
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

14. My role in this school/ class had not been clearly outlined to me at University

I _____ I _____ I _____ I _____ I _____ I _____ I _____ I _____ I
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

15. The staff in this school had a positive attitude towards students with disabilities

I _____ I _____ I _____ I _____ I _____ I _____ I _____ I _____ I
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

16. I felt comfortable and relaxed in my interactions with students with disabilities

I _____ I _____ I _____ I _____ I _____ I _____ I _____ I _____ I
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

17. I would not choose to return to this school or class for another practicum

I _____ I _____ I _____ I _____ I _____ I _____ I _____ I _____ I
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

18. I had received an adequate amount of prior information about this placement

I _____ I _____ I _____ I _____ I _____ I _____ I _____ I _____ I
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

19. Staff in the school gave me little encouragement or support

I _____ I _____ I _____ I _____ I _____ I _____ I _____ I _____ I
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

20. I felt I had been fully prepared for my interactions with students with disabilities

I _____ I _____ I _____ I _____ I _____ I _____ I _____ I _____ I
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

21. When I graduate I would not choose to work in a similar environment

I _____ I _____ I _____ I _____ I _____ I _____ I _____ I _____
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

22. I spent time talking to my supervisor about any questions I had

I _____ I _____ I _____ I _____ I _____ I _____ I _____ I _____
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

23. There was plenty for me to do and I was kept busy for the majority of the time

I _____ I _____ I _____ I _____ I _____ I _____ I _____ I _____
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

24. It took me a long while to develop a positive relationship with students with disabilities

I _____ I _____ I _____ I _____ I _____ I _____ I _____ I _____
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

Appendix 4. 8 Mandatory Contact Scale MCS (Nursing Students)

Please answer the following questions which relate to the Disability. Clinical placement you have named as **the one you remember most clearly by circling the scale at the appropriate point**

1. I found this Clinical placement a positive experience

I _____ I _____ I _____ I _____ I _____ I _____ I _____ I _____
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

2. I received minimal support and guidance from my university lecturer

I _____ I _____ I _____ I _____ I _____ I _____ I _____ I _____
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

3. The specific area in which I spent most time was a positive environment for clients

I _____ I _____ I _____ I _____ I _____ I _____ I _____ I _____
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

4. I found it difficult to interact easily with clients with disabilities

I _____ I _____ I _____ I _____ I _____ I _____ I _____ I _____
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

5. I found this clinical experience to be rewarding

I _____ I _____ I _____ I _____ I _____ I _____ I _____ I _____
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

6. Information gained from the Disability unit (Lectures & Tutorials) was of great benefit to me

I _____ I _____ I _____ I _____ I _____ I _____ I _____ I _____
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

7. The clients I met in this facility do not lead a rewarding or fulfilling life

I _____ I _____ I _____ I _____ I _____ I _____ I _____ I _____
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

8. Any feelings I had of anxiety or uneasiness quickly disappeared

I _____ I _____ I _____ I _____ I _____ I _____ I _____ I _____
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

9. This clinical experience was not one of the best I have had

I _____ I _____ I _____ I _____ I _____ I _____ I _____ I _____
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

10. I was given appropriate feedback from my lecturer in relation to my interaction with people with disabilities

I _____ I _____ I _____ I _____ I _____ I _____ I _____ I _____
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

11. I did not feel relaxed and comfortable in this work environment

I _____ I _____ I _____ I _____ I _____ I _____ I _____ I _____
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

12. Successful interactions with clients with disabilities occurred often and over lengthy periods

I _____ I _____ I _____ I _____ I _____ I _____ I _____ I _____
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

13. This placement enhanced my knowledge and understanding of the area of disability

I _____ I _____ I _____ I _____ I _____ I _____ I _____ I _____
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

14. My role in this facility had not been clearly outlined to me at University

I _____ I _____ I _____ I _____ I _____ I _____ I _____ I _____
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

15. The staff in this facility had a positive attitude towards clients with disabilities

I _____ I _____ I _____ I _____ I _____ I _____ I _____ I _____
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

16. I felt comfortable and relaxed in my interactions with clients

I _____ I _____ I _____ I _____ I _____ I _____ I _____ I _____ I
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

17. I would not choose to return to this facility for another placement

I _____ I _____ I _____ I _____ I _____ I _____ I _____ I _____ I
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

18. I had received an adequate amount of prior information about this placement

I _____ I _____ I _____ I _____ I _____ I _____ I _____ I _____ I
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

19. Staff in the facility gave me little encouragement or support

I _____ I _____ I _____ I _____ I _____ I _____ I _____ I _____ I
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

20. I felt I had been fully prepared for my interactions with clients with disabilities

I _____ I _____ I _____ I _____ I _____ I _____ I _____ I _____ I
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

21. When I graduate I would not choose to work in this type of environment

I _____ I _____ I _____ I _____ I _____ I _____ I _____ I _____
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

22. I spent time talking to my supervisor about any questions I had

I _____ I _____ I _____ I _____ I _____ I _____ I _____ I _____
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

23. There was plenty for me to do and I was kept busy for the majority of the time

I _____ I _____ I _____ I _____ I _____ I _____ I _____ I _____
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

24. It took me a long while to develop a positive relationship with clients with disabilities

I _____ I _____ I _____ I _____ I _____ I _____ I _____ I _____
 definitely false mostly more false more true mostly true true definitely
 false false than true than false true

15. What are the major factors which make you fearful of interactions with people with disabilities?

16. Do you have part-time employment? Yes/No

If Yes, please describe the nature of your work

5. My major contact was with people with the following disability

physical mild moderate severe multiple sensory
 intellectual intellectual intellectual deaf or blind

6. In one sentence describe how you feel about your contacts with people with disabilities _____

Please answer the following questions which relate to your experiences with children with disabilities in a school setting.

1. Name the school and class which you **remember most clearly** in relation to these experiences.

2. How many days did you spend with this class ?

3.. What type of disability did the children you spent the majority of time with have?

physical mild moderate severe multiple
 disabilities intellectual intellectual intellectual deaf or blind

4. Name the grade the child /children were in

5. What specific type of interaction did you have with these children?

6. Name any other interactions you have experienced with children in an integrated setting

Name of school _____ Class _____

Time spent

7. Have you had any other major experiences with people with a disability. Yes No

8. In what type of environment did this take place

schoolfriend relative workplace community interaction other
Specify_____

9. Over what length of time did this interaction take place

10. How would you rate your performance in the College Special Education (PSU III) Course in relation to examinations and assessments (Circle the stanine you think you may receive)

1 2 3 4 5 6 7 8 9 10

Fail Pass Credit Distinction

Give a % of your assessments so far

11. Give a one word descriptor of your feelings regarding interactions with people with disabilities

12. What are your major concerns regarding interactions with people with disabilities?

5. My major contact was with people with the following disability

physical mild moderate severe multiple sensory
 intellectual intellectual intellectual deaf or blind

6. In one sentence describe how you feel about your contacts with people with disabilities _____

All of these questions relate to your experiences with people with disabilities. Please read them through slowly and answer them carefully.

Please answer the following questions which relate to your Clinical placement in the area of Developmental Disability.

Read the following list of placements and answer questions beneath which relate to your experiences on Clinical,

Macquarie Hospital	Peat Island Hospital	Rydalmere Hospital	Royal Far West Children's Health Scheme
Riverglade Unit Gladesville	Lorna Hodgkinson Sunshine Home	Fairholm Nursing Home	Crowle Home Ryde
Cairnsfoot School	Fisher Road School	North Rocks School	New Era Activity Centre
Grosvenor Hospital	Allowah Babies Home	Hornsby/Kuringai Residential Service	Other _____

1. From the above list name the placement you **remember most clearly**

2. How many days did you spend at this facility? _____

3. What type of disability did the people you spent the majority of time with have?

physical mild moderate severe multiple sensory
intellectual intellectual intellectual disabilities deaf or blind

4. In what major age category did these people fit?

babies pre-schoolers 5-11 12-18 19-30 30-45 45-60 60+

5. In what type of environment did you spend most of your time with these people?

ward residential activity therapy workshop school other-specify
setting centre classroom

6. Name any other disability placements you have experienced:

Name of Facility_____

Time spent there_____

7. Have you had any other major experiences with people with a disability. Yes No

8. In what type of environment did this take place

schoolfriend relative workplace community interaction other:
specify_____

9. Over what length of time did this interaction take place

10. What was your performance in the Uni Disability course in 1991.

Circle stanine

1 2 3 4 5 6 7 8 9

11. Give a one word descriptor of your feelings regarding interactions with people with disabilities _____

12. What are your major concerns regarding interactions with people with disabilities?

6. In one sentence describe how you feel about your contacts with people with a disability.

From your Practicum sessions or any other experiences across this year think of any interactions you had with a person or student with a disability.

1. From these experiences name the one you **remember most clearly** (name of school, community agency etc)

2. How many days did you spend there? _____

3. What type of disability did the people/ student/s you met have?

physical mild moderate severe multiple sensory
 intellectual intellectual intellectual disabilities deaf or blind

4. In what major age category did these people fit?

babies pre-schoolers 5-11 12-18 19-30 30-45 45-60 60+

5. In what type of environment did you spend most of your time with these people?

residential workshop school own other-specify
 setting classroom home _____

6. Have you had any other major experiences with people with a disability. Yes/No

7. In what type of environment did this take place

schoolfriend relative workplace community interaction other
 specify _____

8. Over what length of time did this interaction take place

These questions relate to your future career choices and your view of the training you have received in the Special Ed/ Integration field.

1. When you complete your University Studies would you consider working in a school which integrated students with disabilities next year? Yes Possibly No

If Possibly or NO why

not _____

2. What area of teaching do you intend to choose

3. Would you consider the possibility of specialising in the Special Ed/ Integration field at any time in the future?

Yes Possibly Never

If YES what type of area would you consider

If NEVER give your reasons

4. Would you consider undertaking post graduate study in special education/integration

Yes Possibly No

5. Would you consider postgraduate study in another area of teaching?

Yes Possibly No

If YES which area

6. Do you think teachers need knowledge about these students Yes/No

If YES what specific knowledge

7. Do you think teachers need specific skills or competencies in this area Yes/No

If YES what specific skills or competencies

8. Do you think teaching students need to experience contact with students with a disability as part of their training Yes/No

If YES in what type of facility or setting should this take place

9. Do you feel the contact you experienced was satisfactory Yes/No

If NO why not

10. Over the last five years my major contact with people with a disability has been

Practicum Community contacts Family members Friends Work
School

5. My major contact was with people with the following disability

physical mild moderate severe multiple sensory
 intellectual intellectual intellectual deaf or blind

6. In one sentence describe how you feel about your contacts with people with disabilities

All of these questions relate to your experiences with people with disabilities. Please read them through slowly and answer them carefully.

Please answer the following questions which relate to your Clinical placement in the area of **Developmental Disability**.

Read the following list of placements and answer questions beneath which relate to your experiences on Clinical,

Macquarie Hospital	Peat Island Hospital	Rydalmere Hospital	Royal Far West Children's Health Scheme
-----------------------	-------------------------	-----------------------	--

Riverglade Unit Gladesville	Lorna Hodgkinson Sunshine Home	Fairholm Nursing Home	Crowle Home Ryde
--------------------------------	-----------------------------------	--------------------------	---------------------

Cairnsfoot School	Fisher Road School	North Rocks School	New Era Activity Centre
----------------------	-----------------------	-----------------------	----------------------------

Grosvenor Hospital	Allowah Babies Home	Hornsby/Kuringai Residential Service	Other _____
-----------------------	------------------------	---	----------------

1. From the above list name the placement you **remember most clearly**

 2. How many days did you spend at this facility? _____

3. What type of disability did the people you spent the majority of time with have?

physical mild moderate severe multiple sensory
intellectual intellectual intellectual disabilities deaf or blind

4. In what major age category did these people fit?

babies pre-schoolers 5-11 12-18 19-30 30-45 45-60 60+

5. In what type of environment did you spend most of your time with these people?

ward residential activity therapy workshop school other-specify
setting centre classroom

6. Name any other disability placements you have experienced:

Name of Facility _____

Time

spent _____

7. Have you had any other major experiences with people with a disability. Yes No

8. In what type of environment did this take place

schoolfriend relative workplace community interaction other
specify _____

9. Over what length of time did this interaction take place

10. What was your performance in the Uni Disability course in 1991.

Circle stanine

1 2 3 4 5 6 7 8 9

These questions relate to your future career choices and your view of the training you have received in the disability field.

1. When you complete your University Studies would you consider working in the disability field next year? Yes Possibly No

If Possibly or No why not

2. What area of nursing do you intend to choose

3. Would you consider the possibility of working in the disability field at any time in the future? Yes Possibly Never

If YES what type of area would you consider

If NEVER give your reasons

4. Would you consider undertaking post-graduate study in the disability area

Yes Possibly No

5. Would you consider postgraduate study in another area of nursing?

Yes Possibly No

If YES which area

6. Do you think nurses need knowledge about the disability field

Yes/No

If YES what specific knowledge

7. Do you think nurses need specific skills or competencies in this area

Yes/ No

If YES what specific skills or competencies

8. Do you think nursing students need to experience contact with people with a disability as part of their training Yes/No

If YES in what type of facility or setting should this take place

9. Do you feel the contact you experienced was satisfactory Yes/No

If NO why not

10. Over the last five years my major contact with people with a disability has been (circle)

Clinical Community contacts Family members Friends Work School

11. What do you consider to be the role of the nurse in the disability field

Appendix 4.14**Outline of mandatory units in developmental disability**

Yr 2 Introduction Semester II

Week	1 hour lecture	2 Hour Lecture	2 Hour Tutorial
1	Introduction to unit	History of DD	Cerebral Palsy
2	Role of the Nurse	Cerebral Palsy	Epilepsy
3	Intro to Assessment	Epilepsy	Residential Care
4	Introduction to Behavioural Analysis	W.H.O. Causes and development	Self -help skills
5	←	Integrated Clinical	→
6	Citizen Advocacy	W.H.O. definitions Genetic causes of DD	Signing
7	ISP s	Life with a disability	Leisure & Rec
8	←	Integrated Clinical	→
9	ISPs	Speech therapy	Families and coping mechanisms
10	Psychosocial aspects Habilitation	Special Education	Physio and Occupational therapy
11	←	Integrated Clinical	→
12	Needs and Services	Creative Awareness	Aggressive and self-destructive behaviour

Appendix 4.13 (continued)

Year 3 Semester I

Week	1 Hour Lecture	2 Hour Lecture	2 Hour Tutorial
1	Programming	Introduction to unit — programming	Teaching skills workbook
2	Research time	Programming	Teaching skills workbook
3	Research time	Research time	Behavioural Analysis case studies
4	←	Integrated Clinical	→
5	Behavioural Analysis	Functional Assessment	Student presentations
6	Legal Rights	Behavioural Analysis	Student presentations
7	←	Integrated Clinical	→
8	Disabled Adult	Early Intervention (guest)	Student presentation
9	Programming (guest)	Area Co-ordinator (guest)	Student presentation
10	Vocational Training	Sexuality and DD	Student presentation
11	←	Integrated Clinical	→
12	Treatment & prevention of DD	Autism	Student presentation

Appendix 4.15 Outline of mandatory unit in special education

Week	1 Hour Lecture	1 Hour Tutorial
1	Philosophy & principles of integration, mainstreaming & normalisation	Introduction to target group: students with disabilities difficulties. &/or learning
2	Current trends relating to integration - policy & practice classification - systems	Critical analysis & discussion of categorisation.
3	Identification & assessment of students with special needs	Curriculum based assessment: academic & social skills
4	Programming & instructional strategies <ul style="list-style-type: none"> • structure of learning activities • co-operative learning • classroom organisation & adaptation 	Curriculum based assessment: academic & social skills
5	Programming & instructional strategies <ul style="list-style-type: none"> • individualised programming 	Individualised programming <ul style="list-style-type: none"> • setting appropriate objectives • choosing appropriate tasks
6	Programming & instructional strategies evaluation	Variety of methods of <ul style="list-style-type: none"> • evaluation of programs & instruction
7	Achieving positive behaviours	Class/school visit preparation <ul style="list-style-type: none"> • observation & collection of information
8	Achieving positive behaviours <ul style="list-style-type: none"> • positive monitoring • climate & culture of classrooms 	Class/school visits
9	Consultation & support networks	Class/school visits
10	Case study	workshops) Discussion of practical application
11	Case study	workshops) Of theory - in practice
12	Review & Evaluation	

Appendix 5.1

Correlations among Items in Each Mandatory Contact Subscales

Item No/Content	PHASE II					
Experience	Item:	1	5	9	13	17
1 positive experience						
5 rewarding experience		.85**				
9 one of the best experience		.75**	.78**			
13 enhance knowledge		.60**	.66**	.59**		
17 happy to return to this facility		.74**	.78**	.80**	.66**	
21 happy to work after grad'n		.60**	.67**	.66**	.51**	.74**
Support	Item:	2	6	10	14	18
2 support & guidance from educator						
6 information gained of benefit		.33**				
10 appropriate feedback from educator		.77**	.32**			
14 role clearly defined at college		.39**	.60**	.41**		
18 adequate infor'n prior to placement		.54**	.51**	.52**	.69**	
22 time talking to my educator		.64**	.24*	.64**	.31**	.44**
Environment	Item:	3	7	11	15	19
3 positive environment for clients						
7 clients' life rewarding & fulfilling		.80**				
11 environment relaxed		.54**	.55**			
15 staff positive attitude to disabled		.68**	.63**	.45**		
19 staff gave encouragement & support		.51**	.48**	.54**	.64**	
23 plenty for me to do & kept busy		.51**	.53**	.53**	.45**	.49**
Interaction	Item:	4	8	12	16	20
4 interact easily with clients						
8 anxiety feeling quickly disappeared		.68**				
12 successful interaction with clients		.66**	.60**			
16 comfortable interaction with clients		.80**	.73**	.67**		
20 prepared for interaction with client		.47**	.49**	.39**	.53**	
24 quick +ve relationship with clients		.77**	.70**	.64**	.82**	.50**

Item No/Content	PHASE III				
Experience	Item: 1	5	9	13	17
1 positive experience					
5 rewarding experience	.83**				
9 one of the best experience	.73**	.77**			
13 enhance knowledge g	.74**	.81**	.71**		
17 happy to return to this facility	.75**	.74**	.83**	.71**	
21 happy to work again after grad	.65**	.63**	.71**	.58**	.74**
Support	Item: 2	6	10	14	18
2 support & guidance from educator					
6 information gained of benefit	.09				
10 feedback from educator	.57**	.23*			
14 role clearly defined at college	.15	.50**	.22*		
18 information prior to placement	.20	.41**	.32**	.60**	
22 spent time talking to educator	.48**	.18	.65**	.29**	.33**
Environment	Item: 3	7	11	15	19
3 positive environment for clients					
7 clients' life rewarding & fulfilling	.71**				
11 environment relaxed	.57**	.60**			
15 staff positive attitude to disabled	.73**	.64**	.55**		
19 staff gave encouragement & support	.54**	.53**	.63**	.55**	
23 plenty for me to do & kept busy	.55**	.57**	.39**	.49**	.32**
Interaction	Item: 4	8	12	16	20
4 interact easily with clients					
8 anxiety feeling quickly disappeared	.72**				
12 successful interaction with clients	.63**	.64**			
16 comfortable interaction with clients	.76**	.71**	.70**		
20 prepared for interaction with client	.58**	.46**	.52**	.52**	
25 quick +ve relationship with clients	.62**	.62**	.59**	.61**	.51**

*p < .01, **p < .001

Appendix 5.2

Correlations among Subscales in Mandatory Contact Scale

	Experience	Support	Environment	Interaction
Teaching and Nursing students together (Phase II, III separate@)				
Experience		.59**	.86**	.83**
Support	.59**		.60**	.49**
Environment	.88**	.58**		.81**
Interaction	.87**	.55**	.83**	
Teaching students (Phase II, III separate@)				
Experience		.52*	.81**	.79**
Support	.32*		.68**	.32
Environment	.82**	.32*		.75**
Interaction	.57**	.29*	.57**	
Nursing students (Phase II, III separate@)				
Experience		.52**	.82**	.77**
Support	.46**		.51**	.39**
Environment	.84**	.41**		.75**
Interaction	.89**	.41**	.80**	

@ In the above matrices, correlations of Phase II are shown in the lower half whereas those of Phase III are shown in the upper half of the matrix.

Not all students responded to MCS scale in Phase III. Variable numbers account for some low Phase III correlation

* $p < .01$, ** $p < .001$.

Appendix 5.3

Correlations Among Items in Self-Efficacy Scale

Phase II

Item No.	1	2	3	4	5	6	7	8
2	.75**							
3	.70**	.75**						
4	.67**	.65**	.75**					
5	.72**	.66**	.65**	.69**				
6	.74**	.70**	.73**	.73**	.69**			
7	.62**	.61**	.62**	.65**	.60**	.65**		
8	.29**	.24**	.34**	.28**	.26**	.33**	.24**	
9	.68**	.79**	.73**	.69**	.59**	.70**	.64**	.34**
10	.59**	.69**	.64**	.65**	.60**	.69**	.62**	.40**
11	.69**	.67**	.69**	.66**	.69**	.62**	.57**	.28**
12	.75**	.67**	.56**	.55**	.68**	.63**	.59**	.21*
13	.56**	.46**	.50**	.55**	.54**	.60**	.53**	.17
14	.65**	.67**	.69**	.62**	.67**	.70**	.71**	.26**
15	.79**	.70**	.69**	.68**	.74**	.72**	.60**	.29**

Item No.	9	10	11	12	13	14
10	.74**					
11	.67**	.72**				
12	.58**	.58**	.69**			
13	.48**	.48**	.48**	.46**		
14	.62**	.58**	.66**	.65**	.54**	
15	.67**	.68**	.79**	.82**	.56**	.73**

Appendix 5.3
(continued)

Phase III

Item No.	1	2	3	4	5	6	7	8
1	1.00	.65**	.58**	.53**	.52**	.62**	.51**	.32**
2	.65**	1.00	.70**	.59**	.40**	.70**	.56**	.37**
3	.58**	.70**	1.00	.63**	.51**	.61**	.66**	.38**
4	.53**	.59**	.63**	1.00	.49**	.63**	.59**	.33**
5	.52**	.40**	.51**	.49**	1.00	.50**	.47**	.34**
6	.62**	.70**	.61**	.63**	.50**	1.00	.59**	.26**
7	.51**	.56**	.66**	.59**	.47**	.59**	1.00	.37**
8	.32**	.37**	.38**	.33**	.34**	.26**	.37**	1.00
9	.41**	.56**	.59**	.53**	.48**	.56**	.55**	.29**
10	.48**	.65**	.60**	.51**	.51**	.62**	.59**	.43**
11	.47**	.56**	.59**	.48**	.37**	.50**	.56**	.41**
12	.48**	.50**	.54**	.44**	.40**	.46**	.59**	.49**
13	.41**	.44**	.45**	.36**	.23*	.35**	.42**	.23**
14	.46**	.52**	.56**	.53**	.44**	.55**	.67**	.26**
15	.54**	.56**	.54**	.47**	.49**	.56**	.48**	.38**

Item No.	9	10	11	12	13	14
10	.68**					
11	.55**	.61**				
12	.39**	.51**	.64**			
13	.35**	.37**	.48**	.42**		
14	.53**	.62**	.56**	.58**	.48**	
15	.48**	.51**	.50**	.58**	.47**	.60**

* $p < .01$, ** $p < .001$.

Appendix 6.1 Correlation coefficients between scale scores within the same phase

	ATDP	IDP	SEIPD
Phase I			
1 IDP (Teachers+Nurses)	-.05		
IDP (Teachers)	-.09		
IDP (Nurses)	-.23*		
Phase II			
2 IDP (Teachers+Nurses)	-.44***		
IDP (Teachers)	-.34***		
IDP (Nurses)	-.33**		
3 Self-Efficacy (T+N)	-.45***	.40***	
Self-Efficacy (Teacher)	-.13	.11	
Self-Efficacy (Nurse)	-.33**	.42***	
Mandatory Contact Subscale			
4 Experience (Teacher+Nurse)	-.45***	.30***	.72***
Experience (Teacher)	-.16	.04	.49***
Experience (Nurse)	-.33**	.23*	.65***
5 Support (Teacher+Nurse)	-.28***	.15*	.50***
Support (Teacher)	-.02	-.03	.28**
Support (Nurse)	.01	-.09	.28**
6 Environment (Teacher+Nurse)	-.42***	.30***	.62***
Environment (Teacher)	-.17	.09	.45***
Environment (Nurse)	-.21*	.20*	.46***
7 Interaction (Teacher+Nurse)	-.48***	.38***	.77***
Interaction (Teacher)	-.28**	.28**	.55***
Interaction (Nurse)	-.36***	.28**	.73***
Phase III			
8 IDP (Teacher+Nurse)	-.18**		
IDP (Teacher)	-.18		
IDP (Nurse)	-.21*		
9 Self-Efficacy (T+N)	-.23**	.09	
Self-Efficacy (Teacher)	-.11	.13	
Self-Efficacy (Nurse)	-.05	.13	
Mandatory Contact Subscales			
10 Experience (Teacher+Nurse)	-.09	.05	.63***
Experience (Teacher)	-.10	.22	.61***
Experience (Nurse)	.00	.04	.45***
11 Support (Teacher+Nurse)	.08	-.13	.46***
Support (Teacher)	-.03	.33*	.27
Support (Nurse)	.18*	-.23*	.34**
12 Environment (Teacher+Nurse)	-.11	.09	.57***
Environment (Teacher)	-.20	.47**	.56**
Environment (Nurse)	.01	.05	.35**
13 Interaction (Teacher+Nurse)	-.17*	.16*	.68***
Interaction (Teacher)	-.03	.29	.60***
Interaction (Nurse)	-.08	.17	.54***

*p < .05, **p < .01, ***p < .001.

Appendix 7.1 Baseline Demographic and Background Information by Student Type

		Type of training		Significant test@ X2
		Teacher N=90	Nurse N=90	
<hr/>				
Sex				.62
	Male	10	7	
	Female	79	83	
Age of Subject				.20
	15-19 years	51	48	
	20 and over	39	42	
Frequency of Direct Contact with pwd		2.79		
	Daily	12	6	
	Weekly	19	23	
	Monthly	17	18	
	Quarterly	13	16	
	Less than quarterly	29	27	
Form of Contact with pwd				1.70
	Social	29	31	
	Community Interaction	24	30	
	Professional	37	29	
Major Context of Contact				1.22
	Friend or Relative	27	27	
	Person in my Community	38	33	
	Work/Uni related	25	30	
Paid Part-Time Employment				
	Nursing Home/Retirement Centre/Hospital	6	29	8.04*
	Shop/Supermarket	12	13	
	Community Based	12	13	
	Other	11	12	
	Total	41	67	
Ethnic Background				
	Parents born overseas	34	13	2.62
	Language other than English spoken	29	11	
<hr/>				

@ Chi-Square test was used to test the distribution when appropriate. *p <.05, **p <.01, p <.001.

Appendix 7.2

Means and standard deviations of ATDP, IDP and SEIPD at data collection phases I, II, and III

		ATDP		IDP		SEIPD	
		Mean	SD	Mean	SD	Mean	SD
Phase I							
Teacher		84.74	11.79	70.34	11.86	n.a. @	n.a. @
Nurse		79.39	11.26	61.97	9.61	n.a. @	n.a. @
Phase II							
Teacher		87.28	10.40	60.04	11.29	3.84	.67
Nurse		75.44	9.88	67.68	10.69	2.56	1.20
Phase III							
Teacher		86.91	7.20	63.38	8.84	3.59	.70
Nurse		79.73	12.27	62.74	10.68	2.46	.76

@ not applicable in this phase

Appendix 7.3

Means and Standard Deviations of Mandatory Contact Scale at data collection phases II and III

		Environment		Support		Positive		Interaction	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD
Phase II									
Teacher		2.28	.98	2.94	1.27	2.35	.84	2.46	.71
Nurse		4.12	1.91	4.85	1.42	4.01	.67	3.91	1.60
Phase III									
Teacher		2.33	1.19	3.35	1.01	2.09	.74	2.10	.55
Nurse		4.38	1.75	4.46	1.37	3.97	1.49	3.64	1.35

Appendix 7.4

F-values of ANOVAs of ATDP, IDP, SEIPD and MCS across data collection phases I, II and III

Student Phases of Study	ATDP		IDP		SEIPD	
	Student Type X Time		Student Type X Time		Type X Time	
I vs. II	57.40***	.37	7.87**	.10	4.28*	52.06***
I vs. III	24.25***	1.51	1.10	17.93***	7.31**	12.41**
II vs. III	73.01***	3.42	5.62*	10.41**	.62	14.42***
I, II, III	66.33***	1.865	.04**	.22	3.84*	26.58***

*p < .05, **p < .01, ***p < .001.

Appendix 7.5

F-values of ANOVAs of ATDP, IDP, SEIPD and MCS across data collection phases II and III

	Effect Variable	Student Type X Time	Student Type X Time
SEIPD	139.04***	7.77**	3.09
Mandatory Contact Subscales:			
Environment	71.34***	.52	.12
Support	45.61***	.06	1.71
Positive	70.88***	.61	.04
Interaction	64.38***	2.06	.08

*p < .05, **p < .01, ***p < .001.

Appendix 7.6

Frequency count of responses to feelings about future interactions with people with disabilities

	Nursing Students N=90	Teaching Students N=90
Words expressing high levels of anxiety		
Apprehensive	8	9
Uncomfortable	8	0
Uneasy	5	0
Scared	7	5
Anxious	6	7
Fearful	7	3
Worried	4	4
Nervous	4	8
Concerned	2	0
TOTAL	51	36
Words expressing caution, uncertainty		
Unsure	12	1
Cautious	8	4
Uncertain	5	4
Hesitant	2	5
Insecure	2	0
Awkward	0	1
Inadequate	0	5
Indifferent	0	1
Reticent	1	0
Ignorant	0	2
TOTAL	30	23
Words expressing ease, interest		
Relaxed	4	0
Interested	2	4
Curious	3	4
Inquisitive	0	2
Happy	0	6
Confident	0	4
Enthusiastic	0	4
Pleased	0	4
Friendly	0	3
TOTAL	9	31

Appendix 7.7

ANOVAs of ATDP, IDP, and MCS by frequency of contact with people with disabilities

	Frequency of Contact					F values
	Daily	Weekly	Monthly	Quarterly	Less than Quarterly	
Phase I						
ATDP	86.9	82.9	79.9	81.7	81.5	1.14
IDP	63.9	62.7	69.3	65.0	68.1	2.27
Success in int'n with people with dis	1.6	1.9	2.1	2.1	2.1	2.41*
Phase II						
ATDP	81.4	81.7	83.9	79.4	80.9	.50
IDP	63.1	63.8	61.4	64.4	64.8	.37
Self-Efficacy	3.0	3.4	3.4	3.3	3.0	.79
MCS subscales:						
Experience	2.3	3.3	3.4	3.7	3.0	1.63
Support	3.5	3.9	3.6	4.6	3.7	2.00
Environment	2.5	3.3	3.3	3.9	3.0	6.72*
Interaction	2.5	3.4	3.4	3.5	3.0	1.82

*p<.05, **p<.01, ***p<.001

Appendix 7.8 ANOVAs of ATDP, IDP, SEIPD and MCS by disability type in general contact

	Physical		Intellectual		Sensory		Multiple		F Value
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	
ATDP	83.41	10.96	78.86	11.19	86.00	12.81	82.59	12.05	1.96
IDP	62.88	12.29	66.42	11.49	66.57	14.58	61.59	11.10	2.43
SEIPD	2.69	.72	3.61	1.20	2.89	1.10	3.15	1.07	6.35***
MCS:									
Experience	2.69	1.45	3.81	1.96	3.08	2.49	2.81	1.50	4.81**
Support	3.27	1.29	4.34	1.74	3.33	2.00	3.82	1.54	2.45
Environment	2.47	1.07	3.80	1.82	2.81	1.45	2.93	1.28	5.88***
Interaction	2.57	.76	3.75	1.67	3.02	1.53	2.86	1.16	6.51***

* p < .05, ** p < .01, *** p < .001

Appendix 7.9

Distribution of future career variables and study choices by student type

Item No.	Item content	Student Type	Response Categories % (N)			
			Yes	Poss'ly	No	
1	Work in sch with disability	Teacher	90 (77)	6 (5)	4 (3)	
	Work in disability field	Nurse	13 (11)	24 (21)	63 (56)	
			Prim.	ESL	Spec Ed	Other
2	Area intend to work	Teacher	90 (76)	8 (7)	1 (1)	1 (1)
			General	Psych	Disab.	Other
		Nurse	63 (56)	4 (4)	1 (1)	32 (28)
			Yes	Poss'ly	Never	
3	Work in special ed in future	Teacher	60 (51)	36 (31)	4 (3)	
	Work with disability in future	Nurse	26 (23)	52 (46)	22 (19)	
			Yes	Poss'ly	No	
4	Post-grad study in special ed	Teacher	59 (50)	36 (31)	5 (4)	
	Post-grad study in disability	Nurse	3 (3)	32 (28)	65 (57)	
			Yes	Poss'ly	No	
5	Post-grad study in another area	Teacher	54 (44)	40 (33)	6 (5)	
		Nurse	78 (69)	18 (16)	4 (4)	
			Yes	No		
6	Teachers need this knowledge	Teacher	99 (84)	1 (1)		
	Nurses need this knowledge	Nurse	96 (82)	4 (3)		
7	Teachers need specific skills	Teacher	93 (78)	7 (6)		
	Nurses need specific skills	Nurse	78 (68)	22 (19)		
8	Disability contact necessary	Teacher	98 (82)	2 (2)		
		Nurse	96 (85)	4 (4)		
9	Contact experience satisfactory	Teacher	72 (60)	28 (23)		
		Nurse	90 (78)	10 (9)		

Appendix 7.10: ANOVAs of ATDP, IDP, and SEIPD (data collection phases II and III) by future career and study choice

Item No	Phase II	ATDP	IDP	SEIPD	Self-Efficacy
1	Work in disability field	Yes	84.06	62.72	2.81
		No	76.97	66.13	3.71
		F-value	15.60***	3.45 ***	26.17
3	Work with disability in future	Yes	83.22	63.00	2.74
		No	80.08	64.78	3.47
		F-value	2.99	.97 ***	16.69
4	Post-grad in disability	Yes	82.74	64.65	2.93
		No	80.32	63.78	3.37
		F-value	1.81	.24	5.99*
5	Post-grad study in other area	Yes	80.96	65.73	3.33
		No	82.03	61.33	2.82
		F-value	.31	5.54*	6.70*
9	Contact exp satisfactory	Yes	81.09	64.10	3.29
		No	82.66	65.28	2.67
		F-value	.46	.28	7.44**
Phase III					
1	Work in disability field	Yes	84.98	62.98	2.58
		No	80.45	62.75	3.56
		F-value	7.51**	.02 ***	72.20
3	Work with disability in future	Yes	85.99	62.12	2.53
		No	81.36	63.48	3.23
		F-value	8.33**	.82 ***	32.91
4	Post-grad in disability	Yes	85.01	62.67	2.59
		No	81.77	63.65	3.23
		F-value	4.02*	.15 ***	26.43
5	Post-grad study in other area	Yes	82.87	63.58	3.01
		No	83.50	62.43	2.82
		F-value	.13	.54	1.79
9	Contact exp satisfactory	Yes	83.02	62.80	2.90
		No	84.88	63.19	3.01
		F-value	.77	.04	.40

*p < .05, ** p < .01, *** p < .001

Appendix 7.11 ANOVAS of MCS (data collection phases II and III) by future career and study choice

Item No			Enviro	Support	Positive	Inter act
Phase II						
1	Work in disability field	Yes	2.77	3.66	2.82	2.90
		No	3.91	4.42	3.92	3.69
		F-value	18.01***	7.98**	20.42***	12.49***
3	Work in area in future	Yes	2.68	3.53	2.78	2.85
		No	3.59	4.23	3.55	3.47
		F-value	11.32***	6.75*	10.20**	7.73**
4	Post-grad in disability	Yes	2.88	3.66	2.91	2.99
		No	3.54	4.22	3.53	3.43
		F-value	5.94*	4.54*	6.74*	3.96*
5	Post-grad study in other area	Yes	3.34	4.08	3.34	3.30
		No	2.99	3.68	3.02	3.06
		F-value	1.45	2.05	1.55	.98
9	Contact exp satisfactory	Yes	3.40	4.15	3.34	3.32
		No	2.64	3.24	2.87	2.87
		F-value	4.69*	7.37**	2.17	2.45

*p < .05, ** p < .01, *** p < .001

Appendix 7.11 (continued)

Phase III						
1	Work in disability field	Yes	2.89	3.68	2.80	2.65
		No	4.90	4.69	4.21	3.89
		F-value	47.33***	17.15***	28.55***	28.28***
3	Work in area in future	Yes	2.74	3.62	2.83	2.68
		No	4.46	4.47	3.85	3.58
		F-value	27.65***	10.49**	11.85***	12.16***
4	Post-grad in disability	Yes	2.99	3.75	3.00	2.73
		No	4.56	4.46	3.84	3.63
		F-value	19.98***	7.79**	8.33**	12.80***
5	Post-grad study in other area	Yes	3.98	4.27	3.61	3.33
		No	3.73	4.13	3.41	3.22
		F-value	.43	.27	.39	.15
9	Contact exp satisfactory	Yes	3.72	4.10	3.39	3.15
		No	4.89	4.92	4.33	4.05
		F-value	4.19*	3.30	3.85	4.16*

*p < .05, ** p < .01, *** p < .001

Appendix 9.1: Experimental treatment groups

Treatment group: Media and Discussion (T2)

Week 1: Theme: Integration/Segregation

- * Review of historical background and current philosophies
- * Discussion of categorisation, labelling and its consequences
- * Video-Captives of Care
- * General Discussion of video-issues, currency and message

Week 2 Theme: Constructive View of Life with a Disability

- * Coping view of life with a disability versus succumbing view
- * Video-Riding the Gale
- * General discussion of video: issues and message

Week 3 Theme: Social Attitudes

- * The power of language
- * Community attitudes
- * Video- The Year of the Patronising Bastard
- * General Discussion of video : issues and message

Treatment 2 Media and Discussion with equal status peer (T1)

Week 1: Theme: Integration/Segregation

- * Review of historical background and current philosophies
- * Discussion of categorisation, labelling and its consequences
- * Video-Captives of Care
- * General Discussion of video-issues, currency and message

Week 2 Theme: Constructive View of Life with a Disability

- * Coping view of life with a disability versus succumbing view
- * Video-Riding the Gale
- * General discussion of Video: issues and message

Week 3 Theme: Social Attitudes

This session differs from the T2 treatment group in that a student from the habilitation course spoke to students about her experiences as a person with a disability in relation to each of the topics listed below

- * The power of language
- * Community attitudes
- * Video- The Year of the Patronising Bastard
- * General Discussion of video-issues and message

Appendix 9.1 (continued)**Treatment 3: Self-efficacy training (T3)****Anticipatory scenarios****Week 1 Theme: Development of anticipatory scenarios**

Students were welcomed to the initial session with the same introduction as for Treatments 1 and 2 . The notion of an anticipatory scenario was then introduced. Students were asked to produce either a totally fictitious scenario or one based on their mandatory contact experience. They were given a series of headings as a guide to the development of the anticipatory scenario as follows:

You are placed for a one-week Clinical practicum in a facility which provides services for people with a disability. Please develop a scenario using the following questions :

- *Describe the setting in detail
 - *Describe the clients general age range, type of disability, communication abilities
 - *Describe your initial reaction to the placement
 - *On your first day you are briefed by your Clinical educator and asked to take charge of a group of four clients. They are your responsibility for the week. Describe these people in detail.
 - *Describe your initial interactions with the group-what you did and said, how you felt about meeting them, how they reacted to you
 - *Describe your first day in detail. What did you do from beginning to end. What were your responsibilities, what happened throughout the day?
 - *How did you feel at the end of the day?
- It is now the end of the week. You have spent 5 days in this placement
- *What were the positive things that happened?
 - *What were the negative things that happened?
 - *What did you find the easiest?
 - *What did you find the most difficult?
 - *Describe your interactions with staff and clinical educator
 - *Were you able to use material and information provided to you in lectures and tutorials? If so, what. If not, why not?
 - *What do you remember most clearly from the weeks experience?
 - *What did you learn from the experience?
 - *How would you feel about returning to this facility?

Students were asked to share these scenarios with another person. They were then placed into random groups of 3-4 and were asked to choose or redevelop one scenario which was common to all experiences.

Appendix 9.1 (continued)**Week 2 Theme: Implementation of cognitive simulations using anticipatory scenarios.**

Scenarios were used as a training tool in the development of self-efficacy toward future interactions with people with disabilities. Cooperative groupwork was undertaken wherein students identified issues which were out of their control and those which could be addressed. Class activities included: a content analysis of scenarios to ascertain common themes, negative and positive issues. Strategies to address some of the issues and concerns were suggested and listed. Group work included role plays and modelling of initial reactions and interactions with staff and clients.

Week 3

Continuation of role play/modelling activities

Groups were asked to visualise and develop more positive anticipatory scenario. These were used as mechanisms to develop effective strategies for interaction with people with disabilities. Groups could choose to role play successful scenarios in front of the class.

The class ended with a whole group session focussing on strategies which could be used to develop more positive interactions with people with disabilities.

Appendix 9.2

Examples of anticipatory scenarios

SCENARIO A.

Description of setting

1. Ward set out in 2 bedded cubicles, with severe to profoundly disabled clients requiring full nursing care. The wards had cockroaches crawling over the floor, and the whole unit had a stench of stale urine. The bathrooms were bare with no privacy and clients were showered in water that was only slightly luke warm. Personal belongings and clothes were shared among clients.

Clients has severe to profound disabilities so communication was virtually impossible. The age of the clients ranged from about 10 to 30 years. The clients made a lot of noise, usually grunting and screaming and not effort was made to discipline the clients in this area.

Initial reaction: SHOCK! We thought that this unit was disgusting (at first). We couldn't believe that human beings were being kept in such an environment. The atmosphere was depressing.

(i) Clients

Person 1

12 yr old boy with Cerebral Palsy. Slobber all over his face. Old clothes that smell like stale urine. He cannot talk or communicate, but makes grunting noises. Full nursing care.

Person 2

28 yr old with mental retardation and spastic. No verbal communication, just grunting. Full nursing care, shower, 2nd hourly nappy change etc.

Person 3

21 yr old girl with severe mental retardation. Can communicate slightly, but runs around removing her clothes all the time. Incontinent. Difficult to handle because she keeps running away.

Person 4

18 yr old girl with severe mental retardation, profound, appears to only look 10 years old. Full nursing care, Cleft-Palate. Difficult to control continues to put items in her mouth.

(iii) Positives

Bus trip to Palm Beach

(iv) negatives

Being left on our own to do all the work while the educator and staff sat outside and smoked and drank coffee.

(v) easiest

Leaving on Friday.

(vi) Day 1 Activities

We were oriented around the ward, had morning tea with staff and then spent time showering clients, then sitting with them.

(vii) Feelings at end of day

Appendix 9.2 (continued)

Tired, annoyed that we had to do all of the work while permanent staff sat around all morning drinking cups of coffee.

(vii) Most difficult

Coping with the fact that the place was so depressing.

E. Staff/ Supervisor interaction.

With clinical supervisor had a de-brief every day.

Able to use information about actual diseases but not really any skills because the majority of clients were unable to be taught, because they were either too disabled or had gone past the point of learning.

G. Most clear memory

Cockroaches on the floor in the kitchen.

H. What you learnt from the experience.

I learnt that there are many places which cater for DD people that are badly run.

I. Feelings about returning

wouldn't go there even if you paid me.

Appendix 9.2 (continued)

SCENARIO B

Description: This setting is within an institution, but a small residential unit. This unit houses 4 young adults. The house has 3 bedrooms with normal house rooms. The clients also have a garden to maintain.

Age from 20-31 yrs. Level of intellectual disability is moderate to severe (bordering). There are 3 of the residents with the ability to communicate verbally to a degree but this level of speech is effective for their communication. 1 of the residents does not speak but are able to be understood through physical gestures & prompting.

Initial reaction: Our virtual reaction was apprehension. There was also the fear of the unknown as the environment for residents were both new to us. We felt overwhelmed by residents' reaction toward us. One resident in particular was very affectionate toward us - whilst communicating with us he stood very close.

Person 1

F - autism; behavioural problems; is compliant; is obsessed/toilets/ties/watches/ & his supervisor

Person 2

T - behavioural problems; attends work at factory each day; does not communicate at all verbally - just does things without being told.

Person 3

W - Down Syndrome; attends living skills is compliant; obsessed with Elvis Presley.

Person 4

L - behavioural problems; quite compliant; attends living skills each day.

Initial meeting was in their cottages where we introduced ourselves to the individuals and asked if they needed anything done as they were cleaning. We felt a little apprehensive about meeting them as we didn't know much about them. Most clients were shy towards us although one of them was very open and talkative.

Positives: Seeing the happiness of the clients especially when they achieved a task. Interaction with us as students were positive, even though they had only known us a week they were warm to us. Living conditions of clients- beautiful furniture, good to see they are not in a ward.

Negatives: Clients fighting amongst themselves, also being unable to communicate with Trevor.

Easiest: Going to the living skills area and helping clients with tasks. Rewarding the clients for doing a task correctly.

Day 1: 8.00 am introduced ourselves. Residents were either showering shaving, grooming or cleaning. We offered assistance to those who needed it or we supervised residents. 9.00 am escorted residents to living skills area after making sure Trevor got into taxi as he goes out to work at a factory. 9.30. supervised residents living skills also getting to know staff etc. 10.00 am morning tea. 10.30. continued supervision and involvement with living skills and games. 12.00 assist residents with lunch, assist staff with cleaning afterwards. 1.00 pm de- brief with educator. 1.30 home.

Appendix 9.2 (continued)

Feelings at end of day: Although the work is not physically draining it is mentally draining. At the end of the day we were exhausted and glad to go home.

Most difficult: First day getting to know the clients. Behavioural difficulties of clients.

Staff/supervisor interaction: They both understood our fears and uneasiness on the first day and allowed us to set our own pace with the clients. When we asked questions they answered to the best of their ability. Staff in the skill training area were very interested in showing us what the clients could do even though their pace was slower.

Integration of theory and practice: Not really as most residents were treated just as any other person with a disability is treated- thus tuts and lectures were not necessary to refer to with these particular residents.

Most clear memory: Introduction to the clients along with our fear of the unknown.

What you learnt from the experience: That there is a positive side to DD placements. Not everywhere sends their clients off to perform uninteresting and often unsupervised tasks in workshops.

Feelings about returning: Wouldn't mind if we had to return but would prefer General Nursing.