PERCEPTIONS OF POSITIVE ATTITUDES TOWARD PEOPLE WITH SPINAL CORD INJURY

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ABSTRACT

The aim of the present study was to identify differences in perceptions of positive attitudes toward persons with SCI (spinal cord injury). The four groups surveyed included 35 people with SCI, 27 rehabilitation workers from a spinal injuries rehabilitation unit in Auckland, 16 rehabilitation workers from a hospital rehabilitation unit in Palmerston North, and 37 people from the general population. Participants completed the Modified Issues in Disability Scale -Transitional Version (Makas, 1993), adjusted slightly for the purpose of the study. The people with SCI were considered the judges of what a positive attitude consisted of, and scored higher on the measure than all other groups. The results showed that the Auckland rehabilitation workers and the general population group differed significantly from the people with SCI in their perceptions of positive attitudes, whereas the Palmerston North rehabilitation workers did not. Age and ethnic identity were significantly related to perceptions of attitudes, with younger adults and Europeans being more aware of positive attitudes than older adults and non-Europeans. Professionally trained rehabilitation workers had a greater awareness than inservice trained workers of what constituted a positive attitude toward people with SCI. The results indicated a lack of awareness among rehabilitation workers and the general population about what constitutes a positive attitude toward people with SCI. Recommendations for future research and practical suggestions for improving awareness were made.

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CHAPTER 1

INTRODUCTION

Spinal cord injury (SCI) may cause permanent motor paralysis below the level of injury with a corresponding loss of sensation. This may take the form of lower body paralysis (paraplegia), or paralysis of both lower and upper portions of the body (quadriplegia or tetraplegia) (Zejdlik, 1992).

In New Zealand the majority of all spinal injuries occur between the ages of 15 and 29 and about 71 percent of people with spinal injury are male (Hood & Woods, 1993). Just over half are caused by motor accidents, with swimming and rugby being the major contributors to sporting injuries (Otara Spinal/ Rehabilitation Unit, 1992).

Spinal cord injuries are about twice as common in New Zealand as in The United States (Spinal Cord Society of New Zealand, 1992). The New Zealand annual rate of 77 people per million, according to the Spinal Cord Society of New Zealand (1992), compares with estimates of from 28 to 50 per million in the United States. Therefore, adjustment to life with SCI is an important issue for many New Zealanders.

Overseas findings have indicated that this adaptation or adjustment process depends upon several factors, one of the most important being the attitudes and behaviours of the society in which the person lives (Gething, 1992a). In particular, the attitudes of rehabilitation professionals toward people with disabilities are seen as the most important contributors to the self-concept and rehabilitation outcome of people with spinal cord injury (Deloach & Greer, 1981; Gething, 1992a; Gething, 1992b; Sadlick & Penta, 1975; Trieschmann, 1988; Wright, 1983). Rehabilitation workers' attitudes often indicate to people with spinal injury the extent to which they are expected to be active and independent (Crisp, 1987). This occurs at a time when they are very vulnerable and in the process of questioning their identity after being injured (Trieschmann, 1988).

However, evidence suggests that people with and without disabilities differ in their perceptions of what constitutes a positive attitude toward persons with disabilities (Makas, 1988). Hence, attitudes which are considered positive by the professional may be experienced as negative and disempowering by the injured person.

To date no systematic attempt has been made in New Zealand to investigate rehabilitation professionals' **perception** of positive attitudes toward people with spinal injury, or to ask people with SCI what they consider to be a positive attitude toward them. The present research aims to fill this gap in the rehabilitation literature and was carried out in Auckland, Wellington, and in the Manawatu.

For the purposes of the present study attitudes and positive attitudes need to be defined and their measurement discussed. This is outlined in the next section.

What are attitudes and why is it important to study them?

According to Triandis (1971), attitudes are ideas charged with emotion which predispose a class of actions to a particular class of social situation. This suggests that attitudes have three components: A cognitive component, which consists of categories of stimuli (such as objects or people) used by people in thinking and the relationships between these categories, and an affective component, which involves the emotion associated with the stimuli included in a particular category. The third component is a behavioural component, which is made up of a predisposition to action, such as seeking or avoiding contact with stimuli in a particular category (Triandis, 1971).

Attitudes serve many functions for individuals. These include helping them to understand the complex world around them, to defend their self-image, and express their personal values (Katz, 1960). Large groups of people with similar attitudes determine the way society defines and values particular groups of people or objects. This may lead to behaviours such as for example, the exploitation and oppression of minority groups in society (Jones, Farina, Hastorf, Markus, Miller & Scott, 1984).

The present study uses the conceptualization of positive and negative attitudes proposed by Wright (1983). Wright (1983) describes positive attitudes toward persons with disabilities as those which emphasize abilities and coping, and which recognize the disability as only one aspect of a multifaceted life. In contrast, negative attitudes focus on succumbing to disability, emphasizing what a person cannot do, and viewing the disability as the central and overriding characteristic of a person (Wright, 1983). Wright's definitions seem to capture what are considered to be positive and negative attitudes in New Zealand today. Attitudes that empower people with disabilities are generally considered positive, while those that are disempowering and emphasize dependency are considered to be negative (Saviola, 1981).

It is important to note that the empowerment of people with disabilities was not always considered to be positive, as attitudes and perceptions of positive attitudes have changed over time. Attitudes toward persons with disabilities seem to have gone through the three phases suggested by Etherington (1990), which have occurred in many nations (Ford, 1981; Gething, 1992c; Treffers, 1991), including New Zealand (Hunt, 1988). In the first phase people with disabilities were seen as helpless and their disabilities as deserved (DuBrow, 1965; Gething, 1992c; Sullivan, 1991). This was followed by a phase early in the nineteenth century in which disability was treated as an individual medical problem. For this reason specialized institutions were set up to care for people with disabilities who began to be treated by the public as objects of charity (Llewellyn, 1983; Sullivan, 1991). In the next phase of this development people with disabilities challenged the assumptions of phase one and two. They questioned their role as passive recipients of help and institutional care and endorsed the view that the greatest barriers to empowerment and community living were the attitudes and beliefs prevalent in the population (Etherington, 1990; Gething, 1992c; Llewellyn, 1983; Treffers, 1991).

The history of attitudes toward people with disabilities demonstrates how attitudes have changed, depending on the time period, culture and society in which people live. Hence, attitudes are not present at birth, but they are learned from others throughout life, and therefore they can be changed.

For this reason the study of attitudes toward people with disabilities is very important, as an understanding of such attitudes may help determine the conditions, techniques and educational programmes that are needed in order to change them (Katz, 1960).

A crucial step in attitude research involves determining the selection of an appropriate measurement instrument. This selection process will be discussed in the next section.

The measurement of attitudes toward people with disabilities

One of the first researchers to measure attitudes in the United States was L. L. Thurstone (1928). Thurstone argued that attitudes toward a particular object could be measured on a single continuum ranging from most favourable or positive to most unfavourable or negative. Following this and other efforts researchers began to investigate attitudes toward people with disabilities.

The adequacy of many of the instruments used between 1930 and the early 1960s, however, is difficult to assess since many of them did not attempt to ascertain or did not report reliability or validity data (Yuker, Block & Younng, 1970). None of these instruments were designed for use with both the non-disabled and people with disabilities, and most referred to specific disabilities such as blindness, deafness, and mental illness (Yuker, Block & Younng, 1970).

In the early 1960s, with a growing emphasis on 'helping' underprivileged groups (Llewellyn, 1990), the focus shifted to studying attitudes toward people with physical disabilities in general. The most widely used and studied measure of attitudes toward people with disabilities was published at this time. This was the original Attitude Toward Disabled Persons (ATDP) Scale developed by Yuker, Block and Campbell (1960, cited in Antonak & Livneh, 1988). Limitations were identified in the ATDP Scale, however, which included its unidimensional nature (in that attitude scores existed on an affective continuum ranging from positive to negative), and failure to investigate attitudes toward specific disabilities. Researchers attempted to meet these shortcomings

by developing improved measures of attitudes, such as the Disability Factor Scales (DFS) which were developed by Siller (1969, cited in Antonak & Livneh, 1988).

The mid 1970s was the start of the movement to integrate children and adults with disabilities into public schools, jobs and homes in the community. The attitudes of teachers, neighbours, and employers were recognized as possible barriers to complete integration and acceptance of people with disabilities and, as a result, researchers constructed scales to measure the attitudes of these particular groups toward people with disabilities (Antonak & Livneh, 1988). The present study is concerned with attitudes of rehabilitation workers which, according to the literature, have a limiting effect on people with disabilities (Deloach & Greer, 1981; Gething, 1992c; Roush, 1986; Trieschmann, 1988).

The number of investigations of attitudes toward people with disabilities increased greatly through the 1980s and the measurement literature was reviewed by many researchers (e.g. Altman, 1981; Antonak & Livneh, 1988). This movement was influenced by the International Year for Disabled People in 1981, which identified among other concerns that the attitudes of nondisabled people were major barriers in the lives of people with disabilities (Etherington, 1990).

In the mid 1980s Makas developed the original Modified Issues in Disability Scale (MIDS-O) from a pool of items which were selected from such widely used measures as the ATDP (Yuker, Block & Campbell, 1960 cited in Antonak & Livneh, 1988) and the DFS (Siller, 1969 cited in Antonak & Livneh, 1988). Other items were designed by Makas to reflect changes in attitudes toward people with disabilities over the middle and late 1980s. In 1993 a revised version, the MIDS-R was published. As Makas believed that any appropriate attitude scale needed to reflect changes over time in attitudes toward people with disabilities, she then developed the MIDS-T scale (Makas, 1993). This scale contains all items of the MIDS-O and the MIDS-R and some additional items (for details refer to Method section). The unique feature of these scales is that people with disabilities were included in their development and were asked to judge what they considered a positive attitude towards them to be.

This involvement of people with disabilities in research which concerns them has become a major issue in attitude research. Historically research has looked at interactions between people with disabilities and non-disabled people primarily from the point of view of the non-disabled person. Such a methodology, argues Makas (1988) reinforces the view that people with disabilities are passive recipients of social interaction, rather than active social negotiators in interactions with non-disabled people. For this reason, Makas' scale, the MIDS-T, was selected as an appropriate measure for the present research.

Current research in attitudes toward people with disabilities has been divided into the three general approaches of picture ranking, sociometric methods, and paper and pencil survey methods (Altman, 1981). The MIDS-T scale (Makas, 1993) is an opinion survey, which is a direct method of attitude measurement in which the respondent is aware of the purpose of the research (Antonak, 1988).

CHAPTER 2

LITERATURE REVIEW

Attitudes of rehabilitation workers

It has been suggested that if the attitudes and expectations of others are a major influence in the development of new roles and self-concepts of people with disabilities, then the attitudes of workers involved with rehabilitation should be of particular importance and concern (Bender, 1980).

Gething (1992b) defines negative attitudes as those in which people with disabilities are stereotyped according to their disabling conditions and are viewed as different from others, the implication being that they are less functionally and psychologically capable than nondisabled people. According to Roush (1986) health care workers hold negative attitudes toward people with disabilities that are similar to, and may actually perpetuate, those held by society as a whole. The growing number of studies and research reviews supporting this contention suggest that there are more negative attitudes among rehabilitation workers than might be expected (Bell, 1962; Bender, 1980; Elston & Snow, 1986; Geskie & Salasek, 1988; Harasymiw, Horne, & Lewis, 1976; Lyons, 1991; Sadlick & Penta, 1975).

Data also suggests that rehabilitation personnel have preconceived ideas about reactions to sudden disability such as spinal cord injury, and consequently how patients should behave (Gething, 1992b; Stubbins, 1982). In particular, they tend to perceive more psychological suffering than people with spinal injuries actually experience (Bodenhamer, Achterberg-Lawlis, Devorkian, Belanus & Cofer, 1983; Westbrook & Nordholm, 1986). Westbrook (1981) suggests that this may be due to the misapplication of traditional stage theories of reactions to disability, which argue that people with disabilities must experience a series of emotions (such as shock, denial, anger, and depression) before they are able to accept their disability. A rehabilitation

worker, for example, may interpret a patient's emotional outburst as 'being at the angry stage' instead of looking at how their own behaviour or other factors (such as services or working conditions) may have contributed to their anger.

People with disabilities have reported their experiences with rehabilitation workers to be mostly negative (Morris, 1989), with a common criticism being that they are not listened to and their perspective is undervalued (Barton, 1989). Other experiences include being a target of humour (Sherrard, 1988), and having emotional needs ignored (Morris, 1989). Deloach and Greer (1981) have further suggested that negative attitudes of rehabilitation staff are reflected in behaviours such as over-emphasizing the effects of disability on adjustment, treating people with disabilities in terms of their disabilities instead of other characteristics, and consistently underestimating their potential. The strengths and abilities of people with disabilities tend not to be considered by many rehabilitation workers. Trieschmann (1988) has argued that negative expectations of staff could create a psychological climate in which the person with a disability such as spinal cord injury realizes that everyone considers him or her to be very unfortunate.

Furthermore, evidence suggests that the longer rehabilitation staff work with people with disabilities, the more insensitive they become to the reactions and communications of patients (Bodenhamer, Achterberg-Lawlis, Devorkian, Belanus & Cofer, 1983). It is the view of many writers that this continuing focus on succumbing to disability (Wright, 1983) referred to as the 'medical model' approach (Llewellyn, 1983), is largely responsible for the devaluing attitudes with which many professionals view the capabilities of their clients (Crisp, 1987; Deloach & Greer, 1981; Joe, 1981; Stubbins, 1984).

Of particular relevance here is the medical model's orientation to "cause, result, cure and closure" (Deloach & Greer, 1981), as this may lead to a sense of personal failure when cure is not achieved with people who have permanent disabilities (Sadlick & Penta, 1975). Furthermore, the holder of power in this relationship is usually the

professional (MacLean, 1980; Stubbins, 1988) and the target of change is usually the individual with the disability (Thoreson & Kerr, 1978).

According to Joe (1981) some potential clients resist professional advice because they fear giving up some of their personal autonomy. Empowerment is central to the objectives of people with disabilities (Barton, 1989), and needs to be encouraged by professional service delivery (Brown & Ringma, 1988; Crisp, 1987). Therefore, McKenzie (1986) suggests that rehabilitation workers should be clear that the client is in charge. This may avoid the tendency of professional behaviour to perpetuate an environment which supports professional views alone. Other writers suggest that attitude assessment and improvement should be built into rehabilitation workers' recruitment and training (Bender, 1980; Brown & Ringma, 1988; McKenzie, 1986; Mitchell, 1990; Zejdlik, 1992).

The importance of such improvements is supported in the following examination of the impact these attitudes have on rehabilitation outcomes.

The effect of rehabilitation workers' attitudes in rehabilitation outcomes

As previously stated, professionals' attitudes convey expectations to people with disabilities about behaviour, goals and aspirations, and hence, may have important implications for rehabilitation outcomes and the quality of life of people with disabilities. Many authors agree that the negative attitudes held by rehabilitation workers discussed in the previous section serve as barriers to rehabilitation (Bell, 1962; Bodenhamer, Achterberg-Lawlis, Kevorkian, Belanus, & Cofer, 1983; Chubon, 1982; Deloach & Greer, 1981; Etherington, 1990; Gething, 1992b; Heath, 1988; Joe, 1981; Lyons, 1991; Roush, 1986; Trieschmann, 1988; Zejdlik, 1992). Some researchers even suggest that staff attitudes may be more crucial in determining an individual's response to rehabilitation than any other single force (Deloach & Greer, 1981; Sadlick & Penta, 1975; Tucker, 1980). Such attitudes may also strongly influence the attitudes of family members as well as those of society at large (Altman, 1981; Antonak & Livneh, 1988;

Sadlick & Penta), and contribute to the view that problems derive from within people with disabilities themselves rather than from the environment (Stubbins, 1984).

It has been suggested that the practices of rehabilitation units and hospitals overseas reinforce dependency (Oliver, 1989) and may lead to the 'institutionalization' of patients (Kennedy, Fisher, & Pearson, 1988). Researchers have found, for example, patients to be engaged in solitary activity most of the time, spending only small amounts of time interacting with other patients (Kennedy, Fisher, & Pearson, 1988). They often have very little involvement in decision making, interact with staff in mostly task type interactions (Kennedy, Fisher, & Pearson, 1988), and contribute to only a small amount of the discussion during rounds (Rintala, Hanover, Alexander, Sanson-Fisher, Willems, & Halstead, 1986).

Some outcomes of these practices may include patients becoming apathetic and dependent upon staff and lacking motivation toward recovery. The patient and their family may also become alienated from each other (Abramson, Kutner, Rosenberg, Berger, & Weiner, 1963).

As well as the nature of the rehabilitation environment, research suggests that the attitudes of individual rehabilitation workers themselves affect outcomes (Fish & Smith, 1983). For example, when a worker views severe disability as a catastrophic event which destroys one's chance for a happy, fulfilling life (Allport, 1984; Joe, 1981), their client may then accept this definition of their situation (Buscaglia, 1975; Deloach & Greer, 1981; Llewellyn, 1983; Trieschmann, 1988). As a result clients may lose interest in rehabilitation, lack personal motivation or willingness to participate, which may, in turn, be interpreted by the worker as symptoms of the disability or personality defects of the client (Holmes & Karst, 1990). It is argued that this would hinder the growth and rehabilitation of even the most capable clients (Harasymiw, Horne & Lewis, 1976).

In addition to these, researchers have investigated the following attitudes and behaviour of rehabilitation workers that help and hinder the rehabilitation process. Those that ar

beneficial to client outcomes include empowering clients to make choices which are supported by staff (Caradoc-Davies & Disler, 1990; MacLean, 1980), encouraging them to become the team leader in charge of their own use and supervision of professional services (Joe, 1981; MacLean, 1980), and implementing clear standards of client consultation (Hunt, 1988). Patient rapport and cooperation also thrives on specific instructions, positive affect shown by the professional, and offers of continued interest (Korsch & Negrete, 1972). Furthermore, patients in rehabilitation environments which stress psychosocial concerns retain more physical gains than those in environments which strongly emphasise the physical aspects of care (Tucker, 1980).

In contrast, authoritarian behaviours of rehabilitation workers are related to low client compliance with recommendations (Anderson, 1975). Clients in this situation may feel that they have no direct control over their lives, and as a result become apathetic and develop attitudes of inferiority and incompetence (Saviola, 1981). Some authors suggest that this may also result from workers and clients having differing perceptions of client needs and goals and differing conceptions of disability (Arnold & Chapman, 1992; Hershenson, 1992; Makas, 1980; Weinberg & Williams, 1978).

Therefore, how others behave to an individual who has recently acquired a permanent disability may have a major influence on their reaction or adjustment to life with a disability (Heath, 1988). One particular example of this is in the area of rehabilitation of people with spinal cord injury (SCI). According to Zejdlik (1992), rehabilitation is a longitudinal process of recovery and adaptation which begins at the time of injury and extends well beyond the involvement of rehabilitation workers. All efforts of care and support from pre-hospital services, through to the acute care hospital and rehabilitation centre, play a key role in each injured person's life and ultimately, a part in the outcome after SCI (Zejdlik, 1992). The relationships with rehabilitation staff involved immediately following injury may be especially influential as these are the first significant post-injury relationships for nearly all persons with SCI (Tucker, 1980).

In conclusion, as Sherrard (1988) suggests, rehabilitation workers should contribute to the health and well-being of their clients without adding to the existing burden of

permanent disability. Ultimately, by making the changes that research evidence suggests, such as encouraging clients to make choices in their own rehabilitation, it is hoped that more sensitive workers and more effectively coping clients will be able to contribute to the development of a less prejudiced and obstructive society (Westbrook, 1981). Attitudes held by people in the general population which help make up this society will now be examined.

The attitudes of the general population

Many authors support the view that some of the greatest barriers to community living are the attitudes and beliefs prevalent in the community (Etherington, 1990; Gething, 1992a; Kutner, 1971; Pfeiffer & Kassaye, 1991; Roush, 1986; Siller, 1976; Wright, 1980b) and some consider these barriers to be virtually insurmountable (Roessler & Bolton, 1978). Evidence suggests that the attitudes of nondisabled people remain negative (Gething, 1982; Gething, 1992a; Rusalem & Malikin, 1976; Thoreson & Kerr, 1978). Furthermore, there appears to be little or no difference between young and old, or professionals and lay people in their attitudes toward disability groups (Harasymiw, Horne, & Lewis, 1976; Yuker, 1986).

Negative public attitudes are reflected in advertisements valuing only one type of physique (Meyerson, 1948), and in negative responses to proposed or established recreational programmes and group homes for people with disabilities (Altman, 1981). They are also indicated by the nondisabled use of parking reserved for people with disabilities (Altman, 1981) and the small number of buildings and public transport vehicles with good access for people with disabilities (Forde, 1981). This may further serve to perpetuate negative attitudes, as the public has such limited contact with people with disabilities that they tend to hold only a stereotyped image of such individuals. Furthermore, there is no opportunity for this image to be altered through daily experience (Altman, 1981). This lack of everyday contact also allows nondisabled people to think of people with disabilities as somewhat different from themselves (Altman, 1981; Comer & Piliavin, 1975; Furnham & Pendred, 1983; Kutner, 1971; Mussen & Barker, 1943; Westbrook, 1981). Consequently, without making an effort

to find similarities, most nondisabled people deny themselves the opportunity of making a friend who has a disability.

Lonsdale (1990) has found many different types of discrimination to exist in the general population, such as hostility and aggression, being patronizing and excluding and fearing people with disabilities. A particularly common experience of people with disabilities appears to be the humiliation of people talking to their nondisabled friends or companions as if they would not be able to understand what was being said (Butcher, 1991). Other experiences include being the object of sympathy (Makas, 1989) or social avoidance (Fichten, Goodrick, Amsel, & McKenzie, 1991). In contrast, however, experiences of positive attitudes do exist and include for example, staff at a workplace treating people with disabilities as one of themselves (Vincent, 1989).

Saviola (1981) argues that perhaps the most demoralizing attitudes of the non-disabled majority are those which reflect the myth that people with disabilities, and in particular women with disabilities, who are dependent for assistance in performing one or more major life activities, are incapable of leading an independent, self-directing life. Such attitudes of the general population are of concern because they perpetuate stereotypes about people with disabilities and lead to behaviours which affect people with disabilities (Forde, 1981).

The impact these attitudes and behaviours have on the lives of people with disabilities and how they perceive themselves will now be examined.

The influence of attitudes in the lives of people with disabilities

Societal attitudes affect the way nondisabled persons view, relate to, and treat persons with disabilities and, in turn, influence the self-image and aspirations of individuals with disabilities (Altman, 1981; Atkinson, 1991; Barton, 1989; Deloach & Greer, 1981; Hume, 1990; McKenzie, 1986; Mitchell, 1990; Noonan, Barry & Davis, 1970; Rusalem, 1976; Thoreson & Kerr, 1978; Yuker, 1965).

For example, the emotional arousal experienced by nondisabled people in initial interactions with people with disabilities often leads to stereotyped, inhibited, and over-controlled behaviour (Kleck, 1966; Kleck, Ono, & Hastorf, 1966; Kleck, 1968; Kleck, 1969). In response, the person with a disability may display similar behaviours, which confirm the nondisabled persons' false beliefs about people with disabilities (Jones, Farina, Hastorf, Markus, Miller & Scott, 1984). Hence, this behaviour of nondisabled people restricts the opportunities of people with disabilities to learn new and adaptive behaviours (Altman, 1981; Bender, 1980; Comer & Piliavin, 1972).

Other behaviours of nondisabled people which may stem from negative attitudes include asking senseless questions or showing insensitive curiosity (McLernon, 1988), interrogating a person about their disability (Roush, 1986), and giving unnecessary and unwanted help. The responses of people with disabilities to such actions range widely, from confrontational stands to resigned acceptance (Makas, 1989). Some may even perform poorly in tasks in order to retain the sympathy and special privileges that disability engenders, and to avoid negative comparisons with the nondisabled (Kutner, 1971).

Many authors suggest that people with disabilities often come to believe the negative attitudes held by society and as a result devalue themselves (Meyerson, 1948). In this way the attitudes of others are incorporated into the self concepts of people with disabilities (McKenzie, 1986; Meyerson, 1948; Westbrook, 1981) and into their attitudes toward other people with disabilities (Butcher, 1991).

In contrast, Yuker (1965) has described some behavioural outcomes of positive attitudes. These include being warm and friendly, seeking to interact with the person who has a disability, accepting them as a person rather than a disabled person, and de-emphasizing the role of the disability as a determinant of the social interaction. Such behaviours serve to reduce barriers in the lives of people with disabilities (Caywood, 1974; Cohen, 1977), and may encourage productive coping by enhancing the self-esteem of people with disabilities (Jones, Farina, Hastorf, Markus, Millar & Scott, 1984).

Hence, as many authors suggest (Franklin, 1988; Meyerson, 1948; Rusalem & Malikin, 1976), the problem of adjustment to physical disability is largely a problem in creating favourable social psychological situations, and is more a problem of the nondisabled majority than it is of the disabled minority.

In order to understand these attitudes further, some of the factors related to them will now be examined.

Factors associated with attitudes toward people with disabilities

Gender

In relation to gender, studies show that either women have more positive attitudes than men (Chesler, 1965; Siller & Chipman, 1964; Yuker, Block & Younng, 1970) or that there is no relationship between attitudes and gender (Antonak, 1981; Bell, 1962; Furnham & Pendred, 1983; Saunders, 1969; Speakman, 1980; Strohmer, Grand & Purcell, 1984). Rusalem and Malikin (1976) suggest that women may have similar attitudes to men but will be more likely to express them in ways considered more positive due to women being socialized into traditional gender roles.

Culture

Although only small differences have been found in some studies (e.g. Horney, 1978), most research has demonstrated that attitudes toward persons with disabilities do vary across cultures (Kutner, 1971; Walker, 1981). Some studies have found attitudes to vary across cultural groups living in the same country (Florian, Wiesel, Kravetz, & Shurka-Zernitsky, 1988), while others have investigated variations between nations. In one such study, Jordan and Friesen (1968) found attitudes to be more positive in the United States than in Columbia, and least positive in Peru. The authors concluded that people with disabilities are viewed more positively in modern and Western societies than in traditional ones, based on a continuum of socioeconomic-educational modernisation.

Age

Conflicting evidence exists regarding the effect of age on attitudes toward persons with disabilities.

Some research suggests that different age groups may hold differing attitudes toward people with disabilities. In particular small children, teenagers, and older adults have been found to be particularly rejecting, and college students particularly accepting of people with physical disabilities (Rusalem & Malikin, 1976; Ryan, 1981). Speakman's (1980) research suggests that the attitudes held by both males and females become set by the third decade of life. According to Ryan (1981), however, confounds between age and education and between age and life experience may be responsible for these results.

In contrast, other studies have found considerable individual differences and spread of attitude scores to exist within all age groups (Siller & Chipman, 1964) and attitude scores to be unrelated to the respondents' age (Antonak, 1981; Bell, 1962; Saunders, 1969; Strohmer, Grand & Purcell, 1984).

It appears then, that the evidence suggesting a relationship between attitudes and age is controversial.

Occupation and Training

According to Yuker (1988), training that emphasizes the central role of the disability and the competence of the professional in contrast to the incompetency of the person with the disability tends to predispose workers toward negative attitudes. Training that emphasizes the "personhood" and competence of the person with a disability as well as dialogue and teamwork, however, leads to positive attitudes. Such differences may lead to variations in attitudes between occupational groups (Yuker, 1986).

Contact

Some studies have found that people in the general population who have more contact with persons with disabilities tend to have more positive attitudes than those with less (Chesler, 1965; Gething, 1991; Strohmer, Grand & Purcell, 1984). Others have found no significant relationships between contact and attitudes (Antonak, 1981; Furnham & Pendred, 1983; Garske & Thomas, 1990). This suggests that contact per se does not necessarily produce positive attitudes toward persons with disabilities. Rather, it is the nature of the contact which determines whether positive or negative attitudes will develop.

Evidence suggests that contact is more likely to enhance positive attitudes when the person with the disability is of equal or higher status than the nondisabled person (Donaldson, 1980; Pfeiffer & Kassaye, 1991; Yuker, 1988). Positive attitudes may also be increased when contact is voluntary and enjoyable (Antonak, 1981; Gething, 1982; Lyons, 1991; Wright, 1983; Yuker, 1988; Yuker, Block & Younng, 1970) and involves getting to know the person as an individual, rather than as a label or stereotype (Yuker, 1965).

Furthermore, it seems that the context within which contact takes place influences whether positive or negative attitudes develop. For example, a noncompetitive environment appears to be conducive to positive attitude change (Strong & Shaver, 1991; Wright, 1980; Yuker, 1988). According to Wright (1983), this type of climate values the intrinsic worth of people and their abilities rather than their comparative standing.

One might expect then, that contact in a medical setting will have less positive effects on attitudes than contact in either an employment or a social setting. This is because the attitude-enhancing factors described above, such as people with disabilities having equal or higher status than their nondisabled peers, are more likely to exist in the latter two settings. Furthermore, health professionals tend to come into contact with people with disabilities at acute stages of adjustment to disability, when more emphasis is

placed on inadequacies and disability than ability (Gething, 1992b; Jones et al, 1984; Yuker, Block & Younng, 1970). They are unlikely to see these people living and functioning successfully in the world outside the medical setting which would help them to gain a different, more positive view of them.

Positive and negative attitudes toward people with disabilities were influenced by a range of factors. Those investigated in the present study included age, ethnicity, gender, rehabilitation occupation and training, and the amount of contact nondisabled people have had with people with disabilities.

Summary

This review of the literature suggested that negative attitudes toward people with SCI are common among rehabilitation workers and people in the general population, and that such attitudes have many detrimental effects (Deloach & Greer, 1981; Gething, 1992a; Gething, 1992b; Sadlick & Penta, 1975; Trieschmann, 1988; Wright, 1983). According to the literature, a major source of these negative attitudes is lack of awareness of what positive attitudes are. For this reason, the present study aims to investigate what people with SCI in New Zealand perceive to be positive attitudes. It is predicted that rehabilitation workers and people from the general population will differ in their perception of positive attitudes toward people with SCI from people with SCI themselves.

The people with SCI are expected to consider a positive attitude to be one in which abilities and coping are emphasized and people with SCI are viewed as similar to other people rather than different. Furthermore, the disability is seen as part of the person and their life as a whole rather than their central and overriding characteristic. Hence, an emphasis on empowering people with SCI will be central to their idea of a positive attitude. In contrast, the groups who differ significantly from the people with SCI in their attitude scores are likely to consider a positive attitude as one in which people with SCI are considered to have special characteristics and are given special treatment because of their disabilities. This notion of a positive attitude is experienced as disempowering by people with SCI because it presents barriers to participation in many activities in society, and they are expected to be different in many ways to other human beings.

People with SCI are considered to be the judges of what a positive attitude toward them consists of. Therefore, participants with scores that are similar to those of people with SCI have a greater awareness of positive attitudes toward people with SCI than participants whose scores differ significantly from the scores of this group.

The evidence reviewed which suggested a relationship between attitudes and gender and between attitudes and age is controversial. However, most studies supported the prediction that females will have a greater awareness of positive attitudes than males (Chesler, 1965; Siller & Chipman, 1964; Yuker, Block & Younng, 1970) and that the younger the adults are, the more aware they will be of what positive attitudes are (Rusalem & Malikin, 1976; Ryan, 1981).

According to the literature, attitudes toward persons with disabilities vary across cultures (Kutner, 1971; Walker, 1981). In particular, attitudes in modern and Western societies are found to be more positive than those in traditional ones (Jordan & Friesen, 1968). Therefore, it is expected that Europeans in the present study (New Zealand Pakeha and other Europeans) will be more aware of positive attitudes toward people with SCI than non-Europeans (New Zealand Maori, Pacific Islanders and other non-Europeans).

It has been suggested that training has an effect on attitudes and may also lead to variations in attitudes among occupational groups in rehabilitation settings (Yuker, 1986; Yuker, 1988). Hence, the present study predicts that rehabilitation workers in various occupational groups will differ in their perceptions of positive attitudes toward people with SCI. Furthermore, those who have been mainly professionally trained are expected to have a greater awareness of positive attitudes than those who have been mainly inservice trained. The professionals, according to the literature, are more likely to have gained an awareness of people with SCI who are living independently in the community from their training in various settings.

The evidence reviewed indicated that people in the general population who have had a great deal of contact with people who have disabilities, are more likely to have positive attitudes toward them than people who have had very little contact (Chesler, 1965; Gething, 1991; Strohmer, Grand & Purcell, 1984). This is expected to occur in the present study. People who have had more contact than others will have perceptions of positive attitudes that are similar to that of people with SCI themselves.

Aim of the present study

As a result of the literature review on the topic, the general aim of this study was to investigate **perceptions** of positive attitudes toward persons with SCI (spinal cord injury) held by people with SCI and others and measured by the Modified Issues in Disability Scale - Transitional Version (Makas, 1993). This scale consists of the two overlapping measures, the MIDS-O and MIDS-R. The following specific hypotheses were generated.

Hypotheses

1. People with SCI will have higher scores on the MIDS-O, MIDS-R and MIDS-T than both rehabilitation workers and the general public.

2. Females and Europeans (New Zealand Pakeha and other Europeans) will have higher scores on the MIDS-O, MIDS-R and MIDS-T than males and non-Europeans (New Zealand Maori, Pacific Islanders and other non-Europeans), and scores will decrease as age increases.

3. Rehabilitation workers in professional/specialized occupations and professionally trained workers will have higher scores on the MIDS-O, MIDS-R and MIDS-T than rehabilitation workers in non-professional/specialized occupations and inservice trained workers.

4. People in the general population who have had more contact with people with disabilities will score higher on the MIDS-O, MIDS-R and MIDS-T than those with less contact.

CHAPTER 3

METHOD

Sample

The sample of people with spinal cord injury consisted of 35 members of the Paraplegic and Physically Disabled Association who resided in the Manawatu and Wellington regions.

The secretary of the Manawatu branch of the association contacted members by mail and informed them about the research. Ten members who were willing to participate in the study replied to the researcher by post. A member of the Wellington branch telephoned members with SCI in the region and asked for voluntary participation in the study. A list of 25 volunteers was forwarded to the researcher and all took part in the study.

The first sample of rehabilitation workers was selected from the Otara Spinal Injuries and Rehabilitation Unit in Auckland. The manager of the unit provided a list of all staff members. A random sample of 35 rehabilitation staff was selected using random number tables from a total of 82 staff members, and 27 participated in the study.

The second sample of rehabilitation workers were staff members at the Rehabilitation Unit at Palmerston North Public Hospital. Twenty-five workers were approached by the researcher to participate in the study and 16 of these volunteered.

The general population sample consisted of 37 people. They were drawn from both the 1993 New Zealand National Electoral Role using random number tables and from a group of extramural Business Studies students attending an On-Campus course at the University. From the Electoral Role 60 people were randomly selected and 22 returned

the questionnaires by mail. From the 45 extramural students, 15 people were randomly selected and all participated in the study.

Research Instruments

Two instruments were used. These were the Modified Issues in Disability Scale - Transitional Version (MIDS-T) (Makas, 1993) and a brief questionnaire (refer to Appendix A2 and Appendix A3).

A covering letter was included at the beginning of the instruments. This outlined the purpose of the research, assured confidentiality and anonymity, and informed participants of their rights. Respondents signed an informed consent form and received feedback about the study after its completion (for covering letter and consent form refer to Appendix A1).

The Modified Issues In Disability Scale - Transitional Version (MIDS-T)

The Modified Issues in Disability Scale - Transitional Version was developed by Makas (1993) as a self-administered research tool to identify perceptions of attitudes toward people with disabilities. This measure consists of two overlapping scales: the Modified Issues in Disability Scale - Original Version (MIDS-O) (Makas, 1985, cited in Makas, 1993) and the Modified Issues in Disability Scale - Revised Version (MIDS-R) (Makas, 1993). The development and testing of each scale will now be discussed.

Originally, an initial pool of 143 statements about people with physical disabilities was reduced to 100 items by 12 people (5 of whom had disabilities) with expertise in test construction and attitudes toward people with disabilities. Thirty-seven of these items showed statistical strength (good variability and low skewness) among 83 non-disabled student subjects and high consensus as to what constitutes positive attitudes among 92 well-educated professionals with disabilities. These 37 items constitute the MIDS-O (Makas, 1991).

Analyses of responses to the MIDS-O by a sample of nondisabled student subjects was performed by Makas (1991). Cronbach alpha was .79, indicating good internal consistency. Evidence of construct validity was provided by scores differing as predicted according to the respondents' gender, level of contact with people with disabilities, and attitudes predicted by people with disabilities. A significant correlation of .78 with scores on the Attitudes Toward Disabled Persons Scale (Yuker, Block, & Campbell, 1960, cited in Antonak & Livneh, 1988) provided evidence of criterion validity.

Further support for the reliability and validity of the MIDS-O is reported in studies comparing attitude scores with occupational groups, demographic and personality variables, and behavioural measures (Makas, in press/a). The appropriate use of this measure in various cultures has been demonstrated in studies conducted in diverse populations such as Canada, the United States, Costa Rica, and India (Makas, 1991).

The MIDS-O was revised in 1993 in response to the contention that attitude scales must accommodate changes in attitudes (and in the standards by which these attitudes are judged) in order to retain their full predictive value (Makas, in press/b).

Beginning with the original MIDS 100-item pool, the item selection process was repeated by a group of 44 judges (people with disabilities), a new group of 42 non-disabled student subjects, and a new criterion group of 45 non-disabled people who had been identified as having good attitudes. This produced the 33-item MIDS-R. Of these 33 items, the 21 which met the item selection criteria appear in both the MIDS-O and the MIDS-R (E. Makas, personal communication, August 2, 1993).

Initial testing of this new scale has resulted in a correlation of .92 between MIDS-O scores and MIDS-R scores of non-disabled students (E. Makas, personal communication, August 2, 1993). A significant difference was also found between the MIDS-R scores of non-disabled people identified as having particularly good attitudes, and those of a sample of students, strongly supporting the scale's construct validity (E. Makas, personal communication, August 2, 1993).

The MIDS-T scale was developed by Makas in 1993. This version of the MIDS contains **all** the items in the MIDS-O (Makas, 1985, cited in Makas, 1993) and **all** items in the MIDS-R (Makas, 1993). A distinguishing feature of the MIDS-T is that the wording of most of the items has been altered to reflect 'people first' language. For example, the term 'disabled person' has been replaced with 'person with a disability'.

The MIDS-T is a Likert-type scale consisting of 49 statements about people with disabilities in a variety of settings. Respondents indicate on a 7 point scale their extent of agreement or disagreement with each statement. To control for acquiescence responding, 22 of the statements are phrased in a positive direction and 27 in a negative direction.

When scoring the MIDS-T, the process of validating the revised version is assisted by calculating separately the MIDS-O and the MIDS-R scores and testing the correlations between the two (E. Makas, personal communication, August 2, 1993). Following reverse coding of the negatively directed items, Makas suggested the calculation of separate MIDS-O, MIDS-R, and MIDS-T scores. Therefore, this scoring technique is used in the present study.

The aim of the present study was to identify what people considered to be positive attitudes toward persons with spinal cord injury and not their attitudes per se. For this purpose the measure was adapted to refer to people with SCI and some instructions were changed (for details refer to pilot study). Furthermore, as the scale was designed in American English, some terms were replaced with words more commonly used in New Zealand.

The Questionnaire

The questionnaire contained items such as gender, age, ethnicity, and other information which, according to the literature, was related to peoples' perceptions of attitudes toward people with disabilities (included in Appendix A3).

Procedure

The research was reviewed and approved by the Ethics Committees of Massey University, the Manawatu-Wanganui Area Health Board, and the Auckland Area Health Board. All ethical considerations of the New Zealand Psychological Society (New Zealand Psychological Society, 1985) were observed.

Pilot Study:

A Pilot Study was carried out prior to the Main Study in order to:

1. Ascertain whether the adapted MIDS-T items and the brief questionnaire were readable and understandable.
2. Assess the clarity of the instructions.
3. Identify any relevant cross-cultural issues.

A total of 31 people participated in the Pilot Study. This sample consisted of Massey University extramural students taking a first year Rehabilitation Studies paper.

Participants were asked to complete the MIDS-T and to note any questions or instructions which were unclear. A discussion was then held in which the researcher obtained feedback and suggestions.

As a result of the Pilot Study, changes were made to the wording of some instructions and the questionnaire items to improve their clarity.

A common criticism was that participants found it difficult not to give their personal opinion about each statement when asked whether they agreed or disagreed that each statement reflected a positive attitude. In order to overcome this difficulty it was suggested that at the top of each page participants should be reminded that the focus of their responses is on evaluating what kind of attitude each statement reflects. For this reason the question 'What kind of attitude does this statement show?' was given at the top of each page of the attitude measure. Furthermore, the wording of the response

choices were changed from 'agreement' or 'disagreement' with each statement to 'positive' or 'negative'.

Therefore, some changes to the instruments suggested by participants in the Pilot Study were considered useful and some adjustments were made. The adjusted MIDS-T was considered appropriate for use in the Main Study (for adjusted MIDS-T refer to Appendix A2).

Main Study

Data was collected between June and September 1993. People with SCI were telephoned by the researcher and arrangements made to complete the MIDS-T and the questionnaire. These were administered by the researcher face-to-face to 22 people with SCI. Thirteen preferred to fill in the survey on their own and returned them by post.

The researcher visited the Otara Spinal/Rehabilitation Unit in Auckland for two days and explained the MIDS-T and questionnaire to staff who had been randomly selected. Twelve questionnaires were completed face-to-face within the two days and a further 15 were posted to the researcher on completion.

The researcher visited the Rehabilitation Unit of the Palmerston North Hospital and approached staff members to volunteer participation in the study. Sixteen staff members completed the MIDS-T and the brief questionnaire in their own time and returned them to reception desk to be collected by the researcher two weeks later.

The information sheet, MIDS-T scale and brief questionnaire (Appendix A1, A2, and A3 respectively) were posted to 60 randomly selected members of the general public. Twenty-two returned completed surveys to the researcher in the stamped addressed envelope provided.

A class of extramural Business Studies Students attending an August On Campus course was approached and asked to participate in the study. The researcher selected 15 students using random number tables to be included in the study. These were added to the general public sample of 22.

CHAPTER 4

RESULTS

Computer analysis involved processing data with SPSSPC, the Advanced Statistical Package for the Social Sciences (Norusis, 1988).

A reliability analysis was performed on the MIDS-O, MIDS-R and MIDS-T attitude measures. Cronbach's alpha (Cronbach, 1951) was .84 for both the MIDS-O and the MIDS-R scales, and .87 for the MIDS-T. These results compared favourably with the Cronbach's alpha of .79 reported by Makas for the MIDS-O scale (Makas, 1991), and indicated good internal consistency. The correlation of +.94 between MIDS-O scores and MIDS-R scores in the present study was similar to the correlation of +.92 found by Makas (E. Makas, personal communication, August 2, 1993).

Descriptive statistics of each group of participants in the present study are followed by univariate analyses to test the hypotheses outlined earlier.

Descriptive Statistics

Table 1 presents the four groups of people who participated in the present study.

Table 1

Number of participants in each group and in total

Group	Participants	Number
1	People with spinal cord injury	35
2	Otara Spinal/Rehabilitation Unit workers	27
3	Palmerston North Rehabilitation Unit workers	16
4	General population	37
	TOTAL	115

A high proportion of the sample of people with SCI were Europeans (New Zealand Pakeha and other Europeans) (Appendix B, Table B-1). The majority of this group were males (68%) and the mean age was 39 years (for details refer to Appendix B, Table B-2 and Table B-3).

In contrast to the people with SCI, most of the rehabilitation workers from Otara and Palmerston North were women (69% and 80% respectively) (see Appendix B, Table B-2). The rehabilitation workers from Otara had a mean age of about 45 years and the Palmerston North group had a mean age of 38 years (Appendix B, Table B-3). Ninety-four percent of the Palmerston North Hospital rehabilitation workers were Europeans, compared to only 56 percent of the Otara workers. The greatest spread of ethnic identities was that of the Otara rehabilitation workers, where 20 percent were Maori and 12 percent were Pacific Islanders (for details refer to Appendix B, Table B-1). Table B-4 in Appendix B presents the distribution of rehabilitation workers' occupations within each group. Most of the workers in both groups (50% Otara and 86% Palmerston North) had received mainly professional and also some inservice training (refer to Appendix B, Table B-5).

In the general population group males and females were fairly evenly represented (42% female) and there was a wide range of ages (23 to 73 years, mean = 39 years) (refer to Appendix B, Table B-2 and Table B-3). However, almost all the participants (94%) in this group were European (Appendix B, Table B-1). People from the general population were also asked how much contact they had with people who have disabilities. The majority (58%) had very little or no contact at all with people who have disabilities and a minority (9%) had a great deal of contact (for a summary refer to Appendix B, Figure B-1).

Hypothesis 1

People with SCI will have higher scores on the MIDS-O, MIDS-R and MIDS-T than both rehabilitation workers and the general public.

The mean scores of the MIDS-O, MIDS-R and MIDS-T attitude measures were calculated for each group and subject to three separate one-way analyses of variance to test differences among the four groups. The groups consisted of 35 people with spinal cord injury, 27 rehabilitation workers from the Otara Spinal/Rehabilitation Unit in Auckland, 16 rehabilitation workers from the Rehabilitation Unit at Palmerston North Hospital, and 37 people from the general population.

Although no significant differences were found in mean MIDS-O scores, $\underline{F}$ (3,111) = 2.49, ns, there were significant differences in mean scores on the MIDS-R, $\underline{F}$ (3,111) = 2.74, $\underline{p} < .05$, and MIDS-T, $\underline{F}$ (3,111) = 2.74, $\underline{p} < .05$ (for summary of Anovas refer to Appendix B, Table B-6, B-7, and Table B-8). Figure 1 presents a graphical illustration of mean MIDS-T scores for each group. T-tests were used to compare attitude perceptions of people with SCI with those of rehabilitation workers and the general population. As Table 2 shows, the t-tests indicated that people with SCI scored significantly higher than the Otara rehabilitation workers and the general population on both the MIDS-R and MIDS-T. However, people with SCI did not differ from the Palmerston North rehabilitation workers in their scores on the attitude measures.

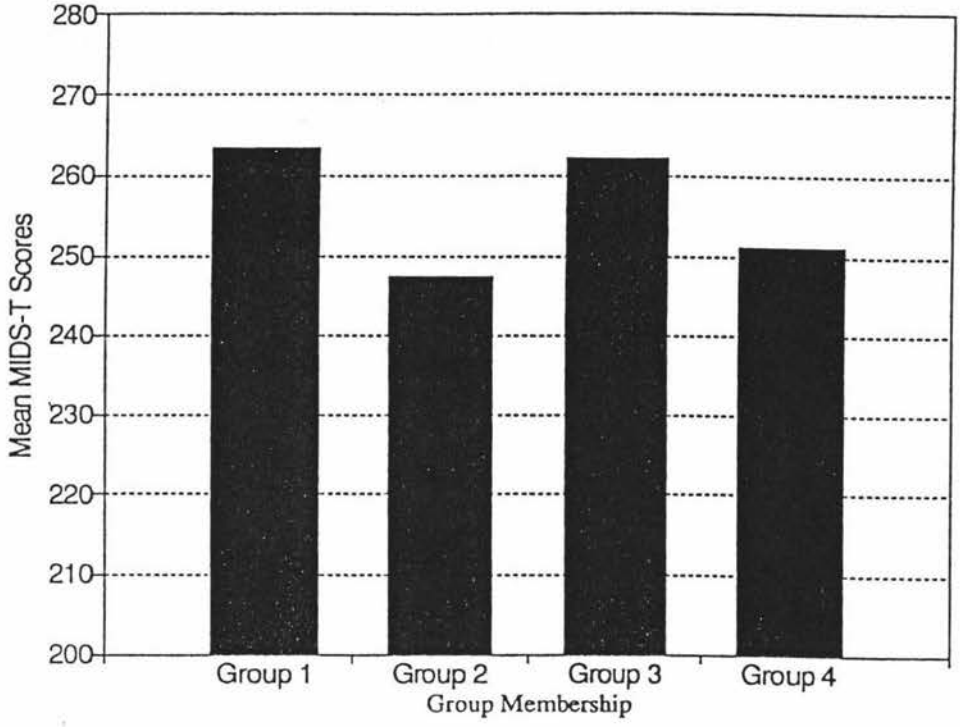

Figure 1

Mean MIDS-T scores for each group.

Group 1: People with SCI

Group 2: Otara Spinal/Rehabilitation Unit workers

Group 3: Palmerston North Hospital Rehabilitation Unit workers

Group 4: General population

Table 2

Summary t-test table of mean MIDS-R and MIDS-T scores for each group.

	People with SCI			Otara workers			
	n	mean	sd	n	mean	sd	t
MIDS-R	35	181.80	19.28	27	169.30	24.95	2.23*
MIDS-T	35	263.60	27.83	27	247.52	32.38	2.21*
	People with SCI			Palmerston North workers			
	n	mean	sd	n	mean	sd	t
MIDS-R	35	181.80	19.28	16	179.75	15.32	0.37
MIDS-T	35	263.60	27.83	16	262.25	19.81	0.17
	People with SCI			General population			
	n	mean	sd	n	mean	sd	t
MIDS-R	35	181.80	19.28	37	172.54	15.54	2.25*
MIDS-T	35	263.60	27.83	37	250.97	20.37	2.21*

* $p < .05$

The findings that the scores of the Otara rehabilitation workers were different from the Palmerston North rehabilitation workers' may be partly explained by ethnic differences in these groups. However, two-way analyses of variance were not performed to investigate this as there was only one non-European in the group of Palmerston North rehabilitation workers. The assumption of homoscedasticity was not met (Moore & McCabe, 1989).

Hypothesis 2

Females and Europeans (New Zealand Pakeha and other Europeans) will have higher scores on the MIDS-O, MIDS-R and MIDS-T than males and non-Europeans (New Zealand Maori, Pacific Islanders and other non-Europeans), and scores will decrease as age increases.

Gender

Three t-tests were performed to test for differences in mean scores between females and males on the MIDS-O, MIDS-R and MIDS-T. The results showed no significant differences between them on any of the measures (for summary of t-tests refer to Appendix B, Table B-9).

Ethnicity

Three t-tests were performed to test for differences in mean scores on the MIDS-O, MIDS-R and MIDS-T between Europeans (New Zealand Pakeha and other Europeans) and non-Europeans (New Zealand Maori, Pacific Islanders and other non-Europeans). The results in Table 3 showed that the European respondents scored significantly higher than the non-Europeans on all three measures.

Table 3

Summary t-test table of mean MIDS-O, MIDS-R and MIDS-T scores for Europeans and non-Europeans

	Europeans			Non-Europeans			
	n	mean	sd	n	mean	sd	t
MIDS-O	86	192.92	17.58	19	168.21	24.30	5.15***
MIDS-R	86	179.55	16.50	19	158.05	22.66	4.78***
MIDS-T	86	261.16	22.22	19	230.58	29.35	5.11***

*** $p < .001$

The findings that Europeans scored significantly higher on the attitude measures may be partly explained by the under-representation of non-Europeans in the highest scoring groups (15% of the people with SCI and 6% of the Palmerston North rehabilitation workers were non-European). However, this possibility was not tested with two-way analyses of variance as the assumption of homoscedasticity was not met (Moore & McCabe, 1989).

Age

To test the hypothesis that age would be negatively associated with MIDS-O, MIDS-R and MIDS-T attitude scores, Pearson's r correlation coefficients were computed. As Table 4 shows, age was negatively correlated with scores on all three scales, suggesting that scores decreased as the age of participants increased.

Table 4

Pearson's r correlation coefficients of age and MIDS-O, MIDS-R and MIDS-T scores.

	Age
	r
MIDS-O	-.22*
MIDS-R	-.17*
MIDS-T	-.20*

* $p < .05$

Hypothesis 3

Rehabilitation workers in professional/specialized occupations and professionally trained workers will have higher scores on the MIDS-O, MIDS-R and MIDS-T than rehabilitation workers in non-professional/specialized occupations and inservice trained workers.

Occupation

T-tests were performed to investigate differences in scores on the attitude measures between workers in professional or specialist occupations (including doctors, nurses, occupational therapists and physiotherapists), and those in non-professional or non-specialized occupations (including orderlies, domestic workers, hospital aides and others). No significant differences in scores were found on any of the attitude measures (refer to Appendix B, Table B-10).

Training

Three t-tests were performed to test the hypothesis that scores of rehabilitation professionals who had received mainly professional training would be significantly higher than those who had been mainly inservice trained. As Table 5 shows,

professionally trained rehabilitation workers scored significantly higher than inservice trained workers on the MIDS-O and MIDS-T scales.

Table 5

Summary t-test table of mean MIDS-O, MIDS-R and MIDS-T scores for professionally trained rehabilitation workers and inservice trained rehabilitation workers

	Professionally trained rehabilitation workers			Inservice trained rehabilitation workers			
	n	mean	sd	n	mean	sd	t
MIDS-O	27	191.30	23.70	24	175.67	20.49	1.98*
MIDS-R	27	175.96	22.36	24	163.83	21.29	1.59
MIDS-T	27	257.15	29.66	24	239.33	25.09	1.81*

* $p < .05$

Hypothesis 4

People in the general population who have had more contact with people with disabilities will score higher on the MIDS-O, MIDS-R and MIDS-T than those with less contact.

Participants were asked how much contact they had with people who have disabilities. Their response choices were 'none', 'very little', 'some', 'quite a bit', and 'a great deal'. Three t-tests were performed to test whether respondents who had at least some contact with people who have disabilities scored higher on the attitude measures than the group with very little or no contact at all with people who have disabilities. There were no significant differences between these two groups in scores on the attitude measures (for details refer to Appendix B, Table B-11). To explore this variable further, t-tests were performed to test differences on the attitude measures between participants who had either quite a bit or a great deal of contact with people with disabilities and those with some, very little or no contact at all. No significant

differences were found in this second group of analyses (refer to Appendix B, Table B-12).

CHAPTER 5

DISCUSSION

The Modified Issues in Disability Scales (Makas, 1993) were highly reliable instruments when adapted to refer to people with SCI and applied to the present samples of people with SCI, rehabilitation workers and general population. All three measures (the MIDS-O, MIDS-R, and MIDS-T) had higher internal consistency than reported by Makas (1991). This may be due to a change over time in the way attitudes are judged, and hence, a need to revise scales to meet this change. Another possibility is that the scales are more suited to a specific disability such as SCI than to various types of disabilities. In sum, the scales used reliably measured the perceptions these groups of New Zealanders had of attitudes toward people with SCI.

Hypothesis 1

People with SCI will have higher scores on the MIDS-O, MIDS-R and MIDS-T than both rehabilitation workers and the general public.

Findings of the present research partially supported hypothesis 1. The people with SCI differed significantly from the group of rehabilitation workers from the Otara Spinal/Rehabilitation Unit in Auckland and people from the general population in their perceptions of positive attitudes toward people with SCI. However, they did not have significantly different perceptions than the rehabilitation workers from the Palmerston North Hospital Rehabilitation Unit.

In the present study people with SCI were considered to be the judges of what a positive attitude toward them should be. They had the highest mean score on the attitude measures. Therefore, a high score indicated an understanding of positive attitudes toward people with SCI that was similar to that of people with SCI themselves and hence, a greater awareness of positive attitudes.

The results supported Makas' (1988) contention that what people from the general population consider to be positive attitudes toward people with disabilities may differ from that of people with disabilities themselves. This suggested that the negative attitudes researchers have found to be prevalent in the non-disabled general population (Gething, 1982; Gething, 1992a; Rusalem & Malikin, 1976; Thoreson & Kerr, 1978) may be due to a lack of awareness of what positive attitudes are and how people with disabilities want to be seen.

One possible reason for the different perceptions of the two groups of rehabilitation workers may be the distribution of ethnic identities in each group. Ninety-four percent of the Palmerston North group of rehabilitation workers considered themselves to be European (including New Zealand Pakeha and other Europeans), compared to 56 percent of the Auckland group. A further 20 percent of the Auckland rehabilitation workers were Maori and 12 percent were Pacific Islanders, reflecting the multicultural population in this part of New Zealand (Department of Statistics, 1993). The present study and overseas research have found differing perceptions of positive attitudes to exist across cultural groups (for details refer to discussion of hypothesis 2). Therefore, although this possibility could not be tested directly, the difference in perception of positive attitudes toward people with SCI found between the two groups of rehabilitation workers may be partly due to cultural influences.

Another explanation is the different rehabilitation environment at each unit. The Otara Spinal/Rehabilitation Unit is a facility which caters for people with SCI from the acute stages of injury, where a long period of bed rest is usually required, until they are ready to re-enter the community (Otara Spinal/Rehabilitation Unit, 1991). The Palmerston North Hospital Rehabilitation Unit, in contrast, is mostly an outpatient unit, where people with SCI who are living in the community visit the facility to receive services (Palmerston North Hospital, 1993).

Researchers have suggested that rehabilitation workers who come into contact with people with SCI at acute stages of adjustment to disability (such as those at the Otara Spinal/Rehabilitation Unit) are working in an environment where more emphasis is

placed on inadequacies and disability than ability (Gething, 1992b; Jones et al, 1984; Yuker, Block & Younng, 1970). For this reason the Otara Spinal/Rehabilitation Unit workers have fewer opportunities than the Palmerston North Hospital Rehabilitation Unit workers to see people with SCI living and functioning successfully outside the medical setting and as a result are less likely to gain a more positive view of them.

Hypothesis 2

Females and Europeans (New Zealand Pakeha and other Europeans) will have higher scores on the MIDS-O, MIDS-R and MIDS-T than males and non-Europeans (New Zealand Maori, Pacific Islanders and other non-Europeans), and scores will decrease as age increases.

Hypothesis 2 was partially supported by the findings of this research. Females were not more aware of positive attitudes toward people with SCI than males. Although they scored higher on the attitude measures than males in the present study, this difference was not significant. Therefore, the findings did not support research which suggested that females have significantly more positive attitudes than males (Chesler, 1965; Siller & Chipman, 1964; Yuker, Block & Younng, 1970).

As expected, there were differences between the two main ethnic groups of Europeans and non-Europeans in scores on the attitude measures. The responses of Maoris, Pacific Islanders and other non-Europeans may need to be considered with some caution, however, as except in the sample of Otara rehabilitation workers, their response rates were lower than that of the Europeans (refer to Appendix B, Table B-1). Europeans in the present study scored significantly higher than the non-Europeans on the attitude measures and therefore had a perception of positive attitudes that more closely resembled that of people with SCI than the non-European groups. There are several possible reasons for this difference.

Firstly, research indicates that attitudes toward people with disabilities do vary across cultures (Kutner, 1971; Walker, 1981) and also across cultural groups living in the same country (Florian, Wiesel, Kravetz & Shurka-Zernitsky, 1988; Westbrook, Legge

& Pennay, 1993). Therefore, what was viewed as positive by the European/Pakeha respondents, for example the encouragement of individual achievement, may have been considered negative by the Maori and Pacific Islanders, whose cultures tend to value collective rather than individual success.

Other influences include the socio-economic status and educational levels of the different ethnic groups. Jordan and Friesen (1968) have suggested that people with disabilities are viewed more positively in modern and Western societies than in traditional ones, based on a continuum of socio-economic and educational modernism. Furthermore, other researchers have found acceptance of physical disability to increase with higher levels of completed formal education (Yuker, Block & Younng, 1970). High income, employment and education all provide opportunities to learn about positive attitudes toward people with SCI and also to experience positive perceptions of them as capable co-workers, fellow students and community members. In New Zealand Europeans on average, have higher levels of formal education and employment than other ethnic groups (Department of Statistics, 1993), and hence have more opportunities to develop awareness of positive attitudes toward people with SCI.

Another reason for the differences between Europeans and non-Europeans in perceptions of positive attitudes toward people with SCI may have been the high proportion of European respondents in the samples of people with SCI (85 percent European) and Palmerston North rehabilitation workers (94 percent European). These were the highest scoring groups on the attitude measures and, although the possibility could not be tested in the present study, their high scores may have contributed to Europeans having significantly higher scores than the non-Europeans.

Findings of the present study suggested that the age of adults in New Zealand was related to their perception of positive attitudes toward people with SCI. Scores on the attitude measure were negatively related to age, indicating that the younger participants were, the more likely they were to view positive attitudes as those emphasizing capability and the inclusion of people with SCI in society. These findings are consistent with those of some overseas studies in which older adults tended to be particularly

rejecting and young adults particularly accepting of people with disabilities (Rusalem & Malikin, 1976; Ryan, 1981). Such differences in attitude perception may be due to the increasing involvement of people with SCI in society and improvements in the level of education New Zealanders are attaining.

The history of attitudes toward people with disabilities (Gething, 1992; Llewellyn, 1983; Sullivan, 1991) has demonstrated how attitudes and perceptions of positive attitudes toward people with SCI change over time and hence, across generations. Older adults, for example, due to living through the 1960s, when most people with disabilities were segregated from communities through institutions (Treffers, 1991) and sheltered workshops (Sullivan, 1991), may not view people with SCI as functionally and psychologically capable individuals. In contrast, younger people in New Zealand have, in the last 15 to 20 years, witnessed the increased empowerment of people with disabilities through deinstitutionalisation and disability rights movements (Hunt, 1988; Sullivan, 1991). One example of this is the development in recent years of tertiary education facilities for people with disabilities, which have resulted in greater access for people with SCI to mainstream educational institutions and to study in general (Alexander & Bridgman, 1982). In this context, greater numbers of people with SCI have been able to display their abilities and achievements as peers and superiors. With these different historical influences, younger adults in this country are more likely than the older adults to be aware of what constitutes a positive attitude toward people with SCI.

Furthermore, increasing numbers of students in New Zealand are achieving high school qualifications and are continuing their education at polytechnics and universities (Department of Statistics, 1993). As previously mentioned, such education creates opportunities to learn about positive attitudes and to dispel myths and stereotypes about people with SCI. Therefore, another factor influencing the awareness of young adults about positive attitudes toward people with SCI is their high level of formal education.

Hypothesis 3

Rehabilitation workers in professional/specialized occupations and professionally trained workers will have higher scores on the MIDS-O, MIDS-R and MIDS-T than rehabilitation workers in non-professional/specialized occupations and inservice trained workers.

Hypothesis 3 was partially supported in the present study. No significant differences in perceptions of positive attitudes were found to exist between rehabilitation workers with professional or specialized occupations and those with non-professional or non-specialized occupations. Rehabilitation workers in professional/specialized occupations, such as nurses, doctors, occupational therapists and physiotherapists, did not differ in their perception of positive attitudes from those in non-professional/non-specialized occupations, such as domestic workers, orderlies and hospital aides, for example. This result did not support studies which have found attitudes to vary across occupational groups (e.g. Yuker, 1986).

One factor influencing this finding may be that although the rehabilitation workers had different occupations they worked together in rehabilitation facilities and therefore may have shared a particular type of contact with people who have SCI. This daily contact and interaction with other staff members may have encouraged the development of similar perceptions of positive attitudes toward people with SCI.

Rehabilitation workers were divided into two training groups: Those that had received mainly professional training, and those with mainly inservice training. The findings suggested that the professionally trained rehabilitation workers had a greater awareness of positive attitudes toward people with SCI than the inservice-trained workers.

Exposure to positive perceptions of people with SCI through education and training may explain this finding. While inservice trained workers may have been immersed in a rehabilitation environment that disempowers people with SCI, professionally trained workers have spent much of their training outside this environment. Therefore, the

professionally trained workers have had more opportunities throughout their training to develop a positive perception of people with SCI.

Furthermore, inservice trained workers are likely to receive education that is specific to their job, whereas professionally trained workers, trained in educational institutions such as universities, may have had a broader focus of education covering related issues such as attitudes toward people with SCI. For these reasons, as Yuker (1988) suggests, the nature of rehabilitation workers' training is an important factor in determining how positive attitudes toward people with SCI will be perceived.

Hypothesis 4

People in the general population who have had more contact with people with disabilities will score higher on the MIDS-O, MIDS-R and MIDS-T than those with less contact.

Hypothesis 4 was not supported in the present study. Participants in the general population who had experienced some, quite a bit, or a great deal of contact with people with disabilities were not significantly more aware of positive attitudes toward people with SCI than those who had none or very little contact. Furthermore, participants who had quite a bit or a great deal of contact did not have significantly higher scores on the attitude measures than those with some, very little, or no contact with people who have disabilities.

These results contradict overseas research which has found a relationship to exist between amount of contact with people who have disabilities and attitudes toward them (Chesler, 1965; Gething, 1991; Strohmer, Grand & Purcell, 1984).

Amount of contact, therefore, did not differentiate between people in the general population with positive perceptions of people with SCI and those with negative perceptions. However, other factors not investigated in the present study may have influenced their perceptions, such as the nature of contact for example. This has been identified by researchers as an important factor in changing attitudes toward people with

disabilities (e.g. Antonak, 1981; Gething, 1982; Lyons, 1991; Wright, 1983; Yuker, Block & Younng, 1970), and may explain why amount contact itself was not associated with perceptions of positive attitudes in this study.

Methodological Limitations

Sample selection and distribution

The sample of rehabilitation workers from the Palmerston North Hospital Rehabilitation Unit was not randomly selected due to the low number employed there. The workers who volunteered to participate may therefore have represented a biased sample of rehabilitation workers who were particularly aware of positive attitudes toward people with SCI. However, similar biases may also be operating in the other groups as not everyone who was sampled agreed to participate in the study.

Cross-Cultural Issues

In the present New Zealand sample there was a low response rate among the non-European groups (for details refer to Appendix B, Table B-1). Some common problems in cross-cultural research may have been operating to cause this. For example, the non-Europeans (including New Zealand Maori, Pacific Islanders and other non-Europeans) may have had a distrust of institutions such as universities, a distrust of research in general, and a response to the ethnicity of the researcher. Lipson and Meleis (1989) have identified these as factors leading to low response rates in some cultural groups. Furthermore, there may be limitations in using a measure in New Zealand that was developed and tested using people from North American cultures (Makas, 1991; Makas, in press/b).

Conclusions and recommendations for future research

In the present study the Modified Issues in Disability Scale - Transitional version (MIDS-T) which consisted of two overlapping measures, the MIDS-O and MIDS-R

(Makas, 1993), and measured perceptions of positive attitudes toward people with SCI, provided the framework for the research. This recently developed instrument was found to be an appropriate measure of perceptions of positive attitudes toward people with SCI in New Zealand society in the 1990s.

The main contribution of this thesis to the literature of attitudes toward people with disabilities is the identification of a significant difference between what people with SCI consider a positive attitude and what rehabilitation workers and the general population perceive to be a positive attitude toward people with SCI. The findings suggested that many people lack awareness of what a positive attitude toward people with SCI is. For example, they may mistakenly view a positive attitude as one which views the disability as the main factor in determining personality and lifestyle. Giving special treatment may also be regarded as positive, when this is experienced by people with SCI as negative, as it portrays them as different to other people. According to people with SCI themselves, a positive attitude highlights similarities among people rather than differences, and views the disability as only one aspect of a multifaceted life.

Ethnicity and age were related to respondents' perceptions of positive attitudes toward people with SCI. Europeans in this study (New Zealand Pakeha and other Europeans) had a greater awareness of positive attitudes than non-Europeans (New Zealand Maori, Pacific Islanders and other non-Europeans), and younger adults were more aware than older adults of what constituted a positive attitude. This suggested that certain groups in society, such as non-Europeans and older adults, could be targeted for education about what constitutes a positive attitude.

People in the general population who had experienced at least some contact with peo with disabilities were not more aware of positive attitudes toward people with SCI than those with very little or no contact at all. This indicated that an increase in the amount of contact non-disabled people have with people with disabilities in everyday life is unlikely to improve their perception of positive attitudes toward people with SCI. Further research is needed in this area to investigate whether it is the nature of contact

with people who have disabilities that influences perceptions of positive attitudes toward them, as the literature suggests.

Significant differences in scores on the attitude measures were found between the two groups of rehabilitation workers, with professionally-trained workers having a greater awareness of positive attitudes than inservice-trained workers. As training has been identified as an important factor in shaping attitudes toward people with disabilities, further research is needed to investigate how training can encourage the development of positive attitudes.

The present study found evidence of a lack of awareness among rehabilitation workers and the general population about what constitutes a positive attitude toward people with SCI. Therefore, future research is needed to investigate whether this finding generalizes to all disabilities. Furthermore, the perceptions of other professional workers, such as school teachers and university lecturers, need to be investigated as their perceptions of positive attitudes can influence greatly the lives of people with SCI and other disabilities.

Practical implications

Some practical suggestions are offered to deal with the general lack of awareness of positive attitudes toward people with SCI. It is recommended that people with SCI be involved as consultants and educators throughout this process.

Firstly, programmes are needed to educate the general population and rehabilitation workers about what people with SCI consider to be a positive attitude toward them. Makas (1988) suggests that non-disabled persons must be educated about disability as a civil rights issue and made aware that many people with disabilities reject special treatment on the basis of their disabilities and do not desire to be perceived as different from others.

For rehabilitation workers, educational programmes could be integrated into their training. An emphasis on the education of workers who receive mainly inservice training and those who see people with SCI in the acute stages of rehabilitation is important, as these workers may lack a concept of people with SCI as functioning independently and successfully in society.

Public awareness raising programmes could be implemented to educate the general population about positive attitudes. Older adults and non-Europeans (including New Zealand Maori, Pacific Islanders and other non-Europeans) need to be targeted as they appear to have less positive perceptions of people with SCI than younger adults and Europeans. Therefore the programmes need to be both culturally and age appropriate in the way the information is delivered.

Newspapers and television would be effective mediums through which to increase awareness. For example, advertising and fund-raising campaigns could emphasize people's abilities rather than portray them as defective and as objects of charity. Newsreaders on television and newspaper articles could use non-disabling language and also emphasize the positive aspects of peoples' lives.

In summary, this research has established there exists a difference in perceptions of positive attitudes toward people with spinal injury. For this reason, to increase awareness of positive attitudes toward people with SCI, education is needed which targets specific groups as well as non-disabled people in general.

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APPENDIX A

APPENDIX A1

Introductory Letter

Attitude Study

My name is Kathy and I am a Massey University student interested in rehabilitation and the empowerment of people with disabilities. To complete my degree I am required to submit a research project which is supervised in the Rehabilitation Studies section of the Department of Psychology at Massey University.

My project is in the area of attitudes toward persons with disabilities. I am not interested in peoples' own attitudes, however, but what they consider to be positive and negative attitudes toward persons with spinal cord injury (SCI).

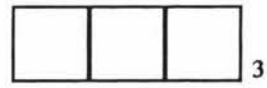
To date there is no New Zealand research which has focused on attitudes toward persons with disabilities so I hope this study will benefit people with SCI and other disabilities as well as rehabilitation professionals in this country.

I would be very grateful for your help in this study. Your participation would involve filling in a short questionnaire and answering a few questions about yourself, such as your age and gender. There are no right or wrong answers to the questionnaire - you are simply asked to give the answer that best describes your opinion on what kind of attitude each statement reflects.

I would appreciate it if you could answer every question. However, you do have the right to refuse to participate, to refuse to answer any particular question, or to withdraw at any stage. The information I am collecting from you is totally confidential and only I will have access to it. The data will be pooled and no individual responses can be identified.

If interested you will receive a summary of my findings when the study is finished. I am happy to answer any questions you may have concerning the study.

Informed Consent Form



ATTITUDE STUDY

Informed Consent Form

This study is concerned with **views of positive attitudes** toward persons with spinal cord injury (SCI).

The enclosed questionnaire asks you to rate a number of statements about people with SCI in a variety of settings. Also included are some questions regarding information about yourself, such as for example your age and gender.

The research has been approved by the ethics committee of Massey University and the Area Health Board.

If you are willing to participate please indicate your consent by signing the following statement:

I have read and understood the above information and I agree to participate in the present study.

Signed.....

If you would like to receive a summary of the research and its findings please provide your name and address below:

Name.....

Address.....

PLEASE NOTE: THIS INFORMATION WILL BE KEPT SEPARATE FROM THE QUESTIONNAIRE.

APPENDIX A2 - MODIFIED MIDS-T

Instructions

The purpose of this study is to gather information from a wide range of people about disability-related issues.

Please indicate, using the scale below, your opinion on each of the 49 statements that follow. I am **not** interested in your personal attitude. Rather, you are asked to **indicate what kind of attitude toward persons with spinal cord injury (SCI) each statement displays.** Although some of these items may appear to be factual, there are really no "right" or "wrong" answers. I am simply looking for **your opinion** on the kind of attitude each statement shows. Therefore, even though you can respond "don't know/no opinion," please use this response only when you really don't have an opinion. Here is how you should rate the items.

WHAT KIND OF ATTITUDE DOES THIS STATEMENT SHOW?

1 - strongly negative		5 - somewhat positive
2 - negative	4 - don't know/no opinion	6 - positive
3 - somewhat negative		7 - strongly positive

If you feel that the statement indicates a very positive attitude toward persons with SCI put a "7" after the statement in the box provided.

If you feel that the statement indicates a very negative attitude toward persons with SCI put a "1" after the statement in the box provided.

All of the other numbers indicate that the statement reflects a partially positive or negative attitude. For example, if you consider a statement quite true (but not completely true) of positive attitudes, you should rate it a "6". Use a "4" only if you have absolutely no opinion on the statement or absolutely no idea whether it reflects a positive or negative attitude toward persons with SCI.

Please rate all the items. Also, please make a separate judgment for each item. Do not look back and forth through the statements or try to remember how you rated similar items before.

☐☐☐ 3

WHAT KIND OF ATTITUDE DOES THIS STATEMENT SHOW?

1 - strongly negative
2 - negative
3 - somewhat negative
4 - don't know/no opinion
5 - somewhat positive
6 - positive
7 - strongly positive

1. The majority of teenagers with SCI should attend special schools which are specifically designed to meet their needs. ☐ 4

2. Certain jobs should be set aside for persons with SCI so that they don't have to compete directly with persons who do not have disabilities. ☐ 5

3. Homes for people with SCI should **not** be prohibited from being established in residential districts. ☐ 6

4. If you are talking to a person with SCI, it is all right to use words such as "stand" or "walk" in a conversation. ☐ 7

5. People who have SCI should have to pay income taxes. ☐ 8

6. Children who have SCI should **not** have to compete academically with children who do not have disabilities. ☐ 9

7. With the current trend in industrial technology, there will probably be fewer jobs in the future that people with SCI can do. ☐ 10

8. Most people who have SCI expect no more love and reassurance than anyone else. ☐ 11

WHAT KIND OF ATTITUDE DOES THIS STATEMENT SHOW?

1 - strongly negative
2 - negative
3 - somewhat negative
4 - don't know/no opinion
5 - somewhat positive
6 - positive
7 - strongly positive

9. If you are walking with a person who has SCI, it is better for him/her to use the wheelchair than for you to push it. ☐ 12

10. Drivers who have SCI should pay more than drivers who do not have disabilities for their vehicle insurance. ☐ 13

11. It is more humane to allow a child with a severe physical disability to die at birth than for him/her to live as a person with a severe disability. ☐ 14

12. Efforts to place people with SCI who have been institutionalized back in the community are really pressing them to do more than they are capable of doing. ☐ 15

13. If a person with SCI becomes angry with people over little things, it should be overlooked because of his/her disability. ☐ 16

14. People with SCI are generally easier to get along with than people who do not have disabilities. ☐ 17

15. Parents of teenagers who have SCI should be as strict as any other parents. ☐ 18

16. It is unwise for a person with SCI to have children. ☐ 19

WHAT KIND OF ATTITUDE DOES THIS STATEMENT SHOW?

1 - strongly negative
2 - negative
3 - somewhat negative
4 - don't know/no opinion
5 - somewhat positive
6 - positive
7 - strongly positive

17. Sheltered workshops (noncompetitive factory work exclusively for persons with disabilities) cannot adequately solve the employment problems of people who have SCI. ☐ 20

18. People with SCI should be expected to meet the same work standards as other people. ☐ 21

19. People with SCI are **not** harder to get along with than those with minor disabilities. ☐ 22

20. People who have SCI are usually easy-going and seldom get angry. ☐ 23

21. One should avoid asking people with SCI questions about their disabilities. ☐ 24

22. People with SCI should have more influence in politics. ☐ 25

23. The cost of putting a person with SCI back into employment is usually less than what that person will pay in income taxes. ☐ 26

24. People with SCI should get special certification from their physicians in order to apply for a marriage license. ☐ 27

25. All children with SCI should be integrated into the regular school system. ☐ 28

WHAT KIND OF ATTITUDE DOES THIS STATEMENT SHOW?

1 - strongly negative
2 - negative
3 - somewhat negative
4 - don't know/no opinion
5 - somewhat positive
6 - positive
7 - strongly positive

26. Wheelchair users frequently have bowel or bladder "accidents" (i.e. they can't get to the bathroom in time). ☐ 29

27. Educational programs for students who have SCI are very expensive in relation to what they gain from them. ☐ 30

28. Most people with SCI are capable of maintaining a clean, attractive home. ☐ 31

29. It is not a good idea to leave a small child with a babysitter who has SCI. ☐ 32

30. You have to be especially careful what you say when you are with a person who has SCI. ☐ 33

31. People with SCI are generally no more anxious or tense than people who do not have disabilities. ☐ 34

32. Adequate housing for people with SCI is **not** too expensive or too difficult to build. ☐ 35

33. Teachers should **not** expect students who have SCI to participate fully in physical education activities. ☐ 36

34. Trained workers who use wheelchairs are **not** more likely, than equally trained workers without disabilities, to have accidents on the job. ☐ 37

WHAT KIND OF ATTITUDE DOES THIS STATEMENT SHOW?

1 - strongly negative
2 - negative
3 - somewhat negative
4 - don't know/no opinion
5 - somewhat positive
6 - positive
7 - strongly positive

35. People with SCI are **not** more likely than people without disabilities to be churchgoers. ☐ 38

36. Since SCI interferes with certain activities, the disability is foremost in the mind of a person with SCI practically all the time. ☐ 39

37. Compared to people who do not have SCI, people with SCI tend to get a more accurate first impression of strangers. ☐ 40

38. The placement of children who have SCI into regular classes improves the acceptance of children with disabilities by their peers. ☐ 41

39. A man or woman with SCI is much more likely than a person without a disability to have a child who will also have a disability. ☐ 42

40. For a person with SCI, ~~the~~ kindness of others is more important than any educational program. ☐ 43

41. People who have SCI are more accident prone than people who do not have disabilities. ☐ 44

42. Most people who have SCI would rather socialize with others who also have disabilities than with people who do not have disabilities. ☐ 45

43. Employers' attitudes are a greater handicap than lack of ability to a person with SCI. ☐ 46

WHAT KIND OF ATTITUDE DOES THIS STATEMENT SHOW?

1 - strongly negative
2 - negative
3 - somewhat negative
4 - don't know/no opinion
5 - somewhat positive
6 - positive
7 - strongly positive

44. A high school student with SCI will probably feel inadequate in a regular classroom. ☐ 47

45. Drivers with SCI have more motor vehicle accidents than drivers without disabilities. ☐ 48

46. Many men who have SCI are able to have children of their own. ☐ 49

47. People with SCI should be expected to fit into our competitive society. ☐ 50

48. It would be much easier for people who have SCI if they lived in residential units (e.g., a block of flats) with others who also have disabilities. ☐ 51

49. It is logical for a woman who has SCI to consider having a baby. ☐ 52

APPENDIX A3 - BRIEF QUESTIONNAIRE

Brief questionnaire - People with SCI

Personal Details

Are you male or female? ☐ ☐1

How old are you? ☐ ☐3

Do you have paraplegia or quadriplegia? ☐ ☐4

At which spinal injuries unit were you initially treated following injury?

(please tick one)

Burwood ☐

Otara ☐

Other (e.g. general hospital) ☐ ☐5

How would you describe yourself?

(please tick one)

European ☐

Maori ☐

Pacific Islander ☐

Other (specify) ☐

.....

☐6

THANK YOU VERY MUCH FOR YOUR HELP IN THIS SURVEY!

Brief questionnaire - Rehabilitation workers

Personal Details

Are you male or female? ☐ ☐ 1

How old are you? ☐ ☐ 3

How long have you been working with people with Spinal Injuries? ☐ 5

years ☐ months ☐ ☐ 7

What is your position (e.g. nurse, occupation therapist)

at your place of work? ..... ☐ 8

What kind of training/education have you received

for your job? professional training only ☐

inservice training only ☐

professional training and some inservice ☐

mainly inservice and some professional ☐

other ☐ ☐ 9

How would you describe yourself? European ☐

(please tick one) Maori ☐

Pacific Islander ☐

Other (specify) ☐ ☐ 10

.....

THANK YOU VERY MUCH FOR YOUR HELP IN THIS SURVEY!

Brief questionnaire - General population

Personal Details

Are you male or female? ☐ ☐ 1

How old are you? ☐ ☐ 3

How would you describe yourself? (please tick one)

European ☐
Maori ☐
Pacific Islander ☐
Other (specify) ☐
.....

☐ 4

Overall, how much contact would you say you have had with people who have disabilities?

None ☐
Very little ☐
Some ☐
Quite a bit ☐
A great deal ☐

☐ 5

THANK YOU VERY MUCH FOR YOUR HELP IN THIS SURVEY!

APPENDIX B

Table B-1

Ethnicity distribution in each group and in total

Group:	1	2	3	4	**Total**
Ethnic Identity:	%	%	%	%	%
European	85	56	94	94	82
Maori	6	20	0	3	7
Pacific Is.	6	12	0	0	5
Other	3	12	6	3	6

Group 1: People with SCI

Group 2: Otara Spinal/ Rehabilitation Unit workers

Group 3: Palmerston North Hospital Rehabilitation Unit workers

Group 4: General population

Table B-2

Distribution of females and males in each group and in total

Group:	1	2	3	4	Total
	%	%	%	%	%
Female	32	69	80	42	51
Male	68	31	20	58	49

Group 1: People with SCI

Group 2: Otara Spinal/ Rehabilitation Unit workers

Group 3: Palmerston North Hospital Rehabilitation Unit workers

Group 4: General population

Table B-3

Age distribution in each group and in total

Group:	1	2	3	4	**Total**
Age:	%	%	%	%	%
19 - 24	9	0	7	6	6
25 - 34	44	8	28	40	32
35 - 44	17	44	36	24	28
45 - 54	15	32	29	12	20
55 - 64	12	16	0	12	11
65+	3	0	0	6	3
Mean age	39	45	38	39	40

Group 1: People with SCI

Group 2: Otara Spinal/ Rehabilitation Unit workers

Group 3: Palmerston North Hospital Rehabilitation Unit workers

Group 4: General population

Table B-4

Distribution of rehabilitation workers' occupational groups

	Otara Rehabilitation Workers	Palmerston North Rehabilitation Workers	Total
Occupation:	%	%	%
Nurse	46	20	36
Doctor	4	7	5
Orderly	11	0	7
Occupational therapist	19	13	17
Physiotherapist	4	20	10
Domestic worker	8	0	5
Hospital Aide	8	0	5
Other	0	40	15

Group 1: People with SCI

Group 2: Otara Spinal/ Rehabilitation Unit workers

Group 3: Palmerston North Hospital Rehabilitation Unit workers

Group 4: General population

Table B-5

Distribution of rehabilitation workers' training

	Otara Rehabilitation Workers	Palmerston North Rehabilitation Workers	Total
Type of Training:	%	%	%
Professional only	8	0	5
Mainly professional and some inservice	50	86	64
Inservice only	29	7	21
Mainly inservice and some professional	13	7	10

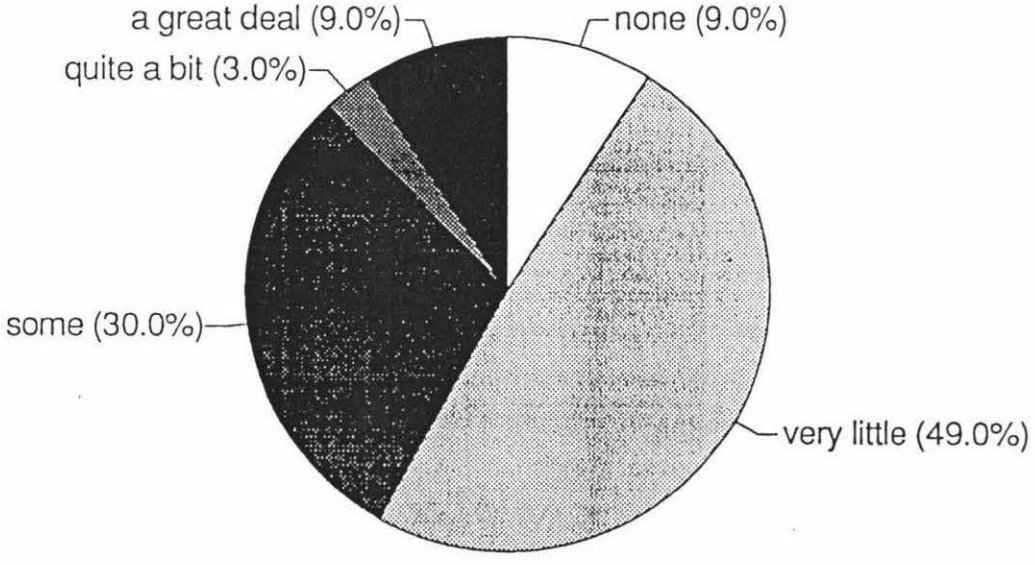


Figure B-1

Contact of general population with people who have disabilities

Table B-6

Summary Anova Table of MIDS-O scores for group 1 (people with SCI), group 2 (Otara rehabilitation workers), group 3 (Palmerston North rehabilitation workers), and group 4 (general population)

Group	n	mean	sd	F	p
1	35	193.86	21.91	2.490	.064
2	27	182.52	25.85		
3	16	195.06	15.92		
4	37	184.77	16.44		

Table B-7

Summary Anova Table of MIDS-R scores for group 1 (people with SCI), group 2 (Otara rehabilitation workers), group 3 (Palmerston North rehabilitation workers), and group 4 (general population)

Group	n	mean	sd	F	p
1	35	181.80	19.28	2.742	.047
2	27	196.30	24.95		
3	16	179.75	15.32		
4	37	172.54	15.54		

Table B-8

Summary Anova Table of MIDS-T scores for group 1 (people with SCI), group 2 (Otara rehabilitation workers), group 3 (Palmerston North rehabilitation workers), and group 4 (general population)

Group	n	mean	sd	F	p
1	35	263.60	27.83	2.736	.047
2	27	247.52	32.38		
3	16	262.25	19.81		
4	37	250.97	20.37		

Table B-9

Summary t-test table of mean MIDS-O, MIDS-R and MIDS-T scores for females and males

	Females			Males					
	n	mean	sd	n	mean	sd	D.F.	t	p
MIDS-O	54	192.00	21.45	52	185.50	20.89	104	1.58	.058
MIDS-R	54	178.76	20.26	52	173.71	19.03	104	1.32	.094
MIDS-T	54	259.72	27.05	52	252.63	26.04	104	1.37	.086

Table B-10

Summary t-test table of mean MIDS-O, MIDS-R and MIDS-T scores for rehabilitation workers in professional/specialized occupations and non-professional/non-specialized occupations

	Professional/specialized occupations			Non-professional/non-specialized occupations					
	n	mean	sd	n	mean	sd	D.F.	t	p
MIDS-O	27	189.81	24.34	14	181.64	22.59	39	1.04	.151
MIDS-R	27	174.33	23.66	14	171.71	21.52	39	.35	.365
MIDS-T	27	255.26	30.84	14	248.64	27.87	39	.67	.252

Table B-11

Summary t-test table of mean MIDS-O, MIDS-R and MIDS-T scores for people in the general population who have had some, quite a bit, or a great deal of contact and very little or no contact with people who have disabilities

	Some, quite a bit, or a great deal of contact			Very little or no contact					
	n	mean	sd	n	mean	sd	D.F.	t	p
MIDS-O	14	178.57	18.43	19	188.16	14.22	31	-1.69	.050
MIDS-R	14	168.14	15.59	19	174.58	15.05	31	-1.20	.120
MIDS-T	14	245.00	21.81	19	253.68	18.91	31	-1.22	.115

Table B-12

Summary t-test table of mean MIDS-O, MIDS-R and MIDS-T scores for people in the general population who have had quite a bit or a great deal of contact and some, very little or no contact with people who have disabilities

	Quite a bit or a great deal of contact			Some, very little or no contact					
	n	mean	sd	n	mean	sd	D.F.	t	p
MIDS-O	4	195.25	19.64	29	182.55	15.89	31	1.46	.077
MIDS-R	4	179.25	17.13	29	170.82	15.17	31	1.03	.156
MIDS-T	4	263.25	27.02	29	248.17	19.12	31	1.41	.084