UNIVERSITY OF ALBERTA

EMPLOYMENT OPPORTUNITIES FOR ALBERTANS WITH SPINAL CORD INJURIES

BY

JODI L. ABBOTT 

A thesis submitted to the Faculty of Graduate Studies and Research in partial fulfilment of the requirements for the degree of Doctor of Philosophy.

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To Michael for believing in me.

To Mom and Dad for teaching me to believe in me.

ABSTRACT

This study was designed to answer the following questions (a) What is the employment situation of Albertans with spinal cord injuries? (b) What features of employment facilitate or hinder the access to meaningful employment for persons with spinal cord injuries who reside in Alberta? and (c) Are the factors identified as influencing labour force participation similar to those identified in the Abbott (1993) study? The Abbott (1993) study involved an examination of the experiences of six individuals as they re-entered the work force following the onset of spinal cord injury.

Working and non-working members of the Canadian Paraplegic Association-Alberta were asked to complete the Spinal Cord Injury - Work Survey. The questionnaire focused on demographics, specifics of employment, factors of the work place, and the attitudes held by persons with spinal cord injuries.

The results indicated that participants with spinal cord injuries were dramatically employment disadvantaged. A greater proportion of the participants were unemployed when compared to Albertans in general. They also worked fewer hours and reported lower employment incomes. The results also indicated that the labour market was not receptive to the full employment of persons with spinal cord injuries because it fails to reasonably accommodate to their needs. Finally, the results indicated that the way in which vocational rehabilitation services are delivered to persons with disabilities needs to be modified. More attention must be directed toward the development of a comprehensive vocational rehabilitation system which includes the following components: (a) counselling in the area of cognitive skill development; (b) guidance in developing effective coping mechanisms; and (c) career counselling, assessment, and placement services.

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CHAPTER ONE
THE PROBLEM

Prejudicial attitudes, architectural barriers and procedural guidelines (such as work performance standards, hours of work and job descriptions) inadvertently curb full labour force participation through the exclusion of specific groups. Women, racial minorities, aboriginal peoples, and persons with disabilities have historically been disadvantaged in the labour market. Designated as targets for the development of a representative workforce, the Employment Equity Act (1986) works "to correct the disadvantage and discrimination in employment that affects" these groups (Agocs, Burr & Somerset, 1992, p. 8). Excellent work force participants may, however, remain outside of competitive employment if attention is not directed at workplace constraints and the experiences of the designated groups.

Although designated group constituents identify unique employment concerns, persons with disabilities may experience multiple disadvantages. For example, the disadvantage in entering the labour force may be magnified when the individual with a disability is also female or Native Indian. Furthermore, statistics indicate that in comparison to the other designated groups, persons with disabilities have made smaller gains in labour force participation since the introduction of the Employment Equity Act (1986). In 1988, less than 2% of positions governed by the Employment Equity Act and the Federal Contractors Program were held by people with disabilities (Vargo, 1991). This represents a mere increase of 0.12% participation from the previous year. In contrast, women represented 42% of the workforce under the Act with an increase in participation of 1.22% from 1987 (Vargo, 1991). Notwithstanding the urgency of employment issues specific to the other designated groups, this study focused on persons with disabilities. More specifically, the study examined those factors that may facilitate or hinder labour force participation for persons who have spinal cord injuries.

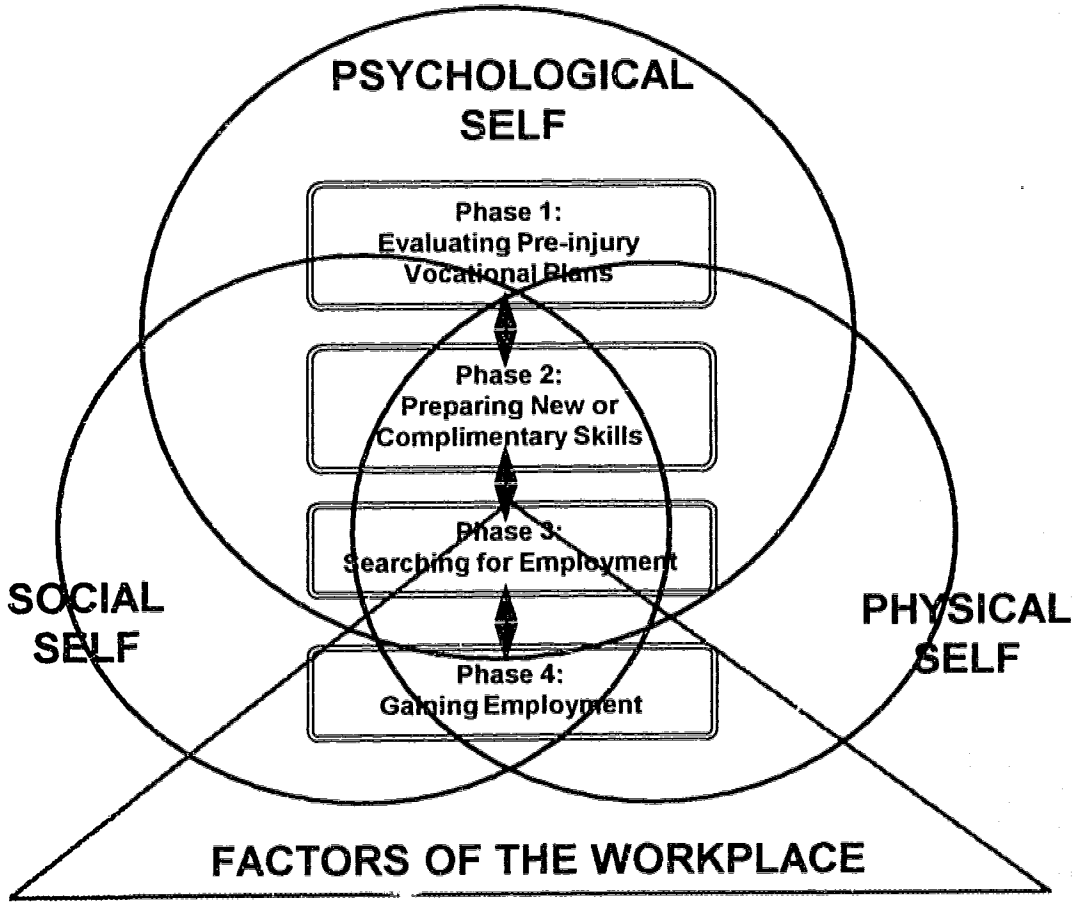
In spite of an anticipated change in labour participation in the near future (Lindroth, 1982; Krahn, 1991; McKay, 1991), the Health and Activity Limitation

Survey - HALS (1991) indicates that in excess of 50% of Canadians and approximately 42% of Albertans with disabilities are either unemployed or not actively engaged in the labour force. When compared to non-disabled Canadians and Albertans, unemployment and inactivity in the labour market is noticeably lower at 27% and 22% respectively (HALS, 1991). This imbalance of representation is further exemplified in Thomas and Thomas (1985), who report that approximately 63% of employed people with disabilities live in poverty. Under-represented in managerial and professional positions (Galt, 1993; Roessler, 1987; Ross & Shillington, 1990; Vargo, 1991) this group find themselves in low paying clerical jobs. Extraordinary expenses (for example, specialized housing and/or attendant care) and inadequate financial remuneration in exchange for employment activity creates a situation in which individuals merely struggle to survive. In fact, compensation and benefit packages of the workplace often do not outweigh the costs of the disability, leaving unemployment as the only option (Shaw & McMahon, 1985).

Suspended career development for those who penetrate the labour market and low rates of labour force participation, are distinct characteristics of the employment activity of persons with disabilities (Agocs et al., 1992; Karp, 1989; Vargo, 1991). Thus, the unique experiences of those who do obtain employment in comparison to those who do not may provide information valuable to vocational professionals who assist persons with spinal cord injuries in the rehabilitation process.

Information obtained by Abbott (1993) was used as a starting point to further examine these issues. The Abbott (1993) interview study involved an examination of the experiences of six individuals as they re-entered the work force following the onset of spinal cord injury. In this study, participants with quadriplegia appeared to pass through a four phase re-entry process on their way to securing competitive employment (see Figure 1).

Figure 1: The Employment Re-entry Process



LEGEND

○ The Self in Conflict
- Psychological
- Physical
- Social

△ Factors of the Workplace
- Temporary Employment
- Flexible Work Schedule
- Presence of Persons with Disabilities in the Workplace
- Aids, Modifications
- Focus on Ability / Equality

Attributes of the Successfully Employed Participant Characterized by:

Doing	Being
- taking the initiative	- dedicated/committed
- setting goals	- determined
- striving for normalcy	- responsible
- persisting	- confident or not
- presents professionally	

This process (shown in Figure 1) seemed to be embedded in a dynamic system that involved attributes specific to the individual, factors of the work place (such as a flexible work schedule, aids and modifications, and the presence of other persons with disabilities in employment), and a social support network. Furthermore, the need for mutual responsibility between employee, employer, and rehabilitation professionals seemed important to the participants of the Abbott (1993) study. Although this study provides information that is valuable to rehabilitation professionals as they assist clients with quadriplegic-type injuries in a return to work, this area of study can be strengthened by including participants with a range of functional limitations (as a result of damage to the spinal cord).

From the earlier work of Abbott (1993), a questionnaire (the Spinal Cord Injury - Work Survey) was developed and distributed to members of the Canadian Paraplegic Association. In addition to obtaining descriptive demographic information, the Spinal Cord Injury - Work Survey gathered information on the factors in the work place that are potentially important agents in the return-to-work process. It is anticipated that knowledge of the factors that inhibit or facilitate entry into the labour market for persons with spinal cord injuries will better prepare them, their employers, and those in the helping professions for the struggles and opportunities that persons with spinal cord injuries may face.

In order to look to the future when labour participation rates of persons with disabilities may increase, it is important to review past circumstances that have placed this group outside of productive and competitive work. In a review of the literature on the traditional place held by persons with disabilities in work, an historical summary provides this context. It is demonstrated that although persons with disabilities struggle to alter their economic standing, preconceived notions about their abilities and status in the work sphere continue to be manifested in the attitudes of employers (Parker & Hansen, 1981). Unfortunately, longstanding stereotypes have contributed to work sites that are not conducive to full employment participation by persons with disabilities. For example, architectural barriers that prevent access to the work site and policies that

inadvertently discriminate can be problematic (Parker & Hansen, 1981). Such physical and procedural obstacles to employment seem to be grounded in attitudes that are perpetuated by individuals and organizations.

In order to erode the attitudinal and structural barriers that prevent full employment participation, fundamental change reflecting the experiences of people with disabilities is required (Agocs et al., 1992). In an attempt to facilitate change, however, an understanding of the barriers is important. Accordingly, the review of literature of the physical, procedural and attitudinal barriers that may impede full employment participation is presented. A brief overview of the physiology of spinal cord injury provides information on the requirement for technical aids and work site modifications in employment. Theories of adjusting to life as a person with a spinal cord injury and literature relevant to vocational development after injury are also reviewed. Finally, literature concerning the provision of vocational rehabilitation is summarized in an effort to present future implications for vocational counselling and disability related work programs.

Importance of the Study

The development of employment equity hiring guidelines, the ongoing desire for independence by people with disabilities, and the emergence of vocational rehabilitation programs, have challenged pre-conceived notions of the role of persons with disabilities in society. According to Shaw and McMahon (1985), the "return to gainful employment has been the most emphasized non-medical goal in the rehabilitation of persons with spinal cord injuries" (p. 188). Studies indicate, however, that very few people (as few as 13%) who have sustained a spinal cord injury obtain competitive employment following the onset of the physical disability (DeVivo et al., 1982, 1987; Kemp & Vash, 1971). This discrepancy points to a need for continued examination of rehabilitation issues relevant to employment. Furthermore, with fiscal restraints imposed by the provincial and federal governments, individualized service to persons with disabilities may be threatened A decline in vocational services to persons with disabilities

attempting to access the labour force may result in a regression rather than an improvement in their labour participation. If fewer people are working, the financial burden on society is likely to increase.

Beyond the economic impact of unemployment are the life changes that are faced by those who have sustained spinal cord injuries. The physical limitations imposed by paralysis determine the need for personal care assistance. As a result, daily living activities often take on a new perspective. For example, getting up in the morning (once a routine activity) may take a great deal of effort as dressing can be problematic when there is paralysis of the upper and/or lower limbs. If there is a purpose to exerting such effort (for example, going to work) the activity of dressing may be once again routinized as a necessary element to starting the day. Without activities to fill the day (one of which may be employment), however, the effort required to mobilize oneself may not be enforced. Thus, employment for persons with disabilities may offer the opportunity to restore a sense of 'normality' after the onset of injury, as well as ensure a return to economic self-sufficiency. For these reasons it is important to understand what factors deter or encourage the return to gainful employment following the onset of spinal cord injury. Once these factors are identified, vocational rehabilitation professionals may be better equipped to assist their clients in overcoming the barriers to employment. If individualised assistance with employment preparation is recognised as important to labour force participation, then arguments will be made to continue and/or enhance existing services for this group. The ideal outcome of the research is to understand the existing employment situation among Albertans with spinal cord injuries and to develop appropriate services for persons with spinal cord injuries so that their participation in competitive employment will increase. In reality, however, the research may be used to advocate for the continuation and/or alteration of vocational rehabilitation services. Suggestions for possible restructuring of these services in a time of fiscal restraint, that consider the interests of persons with spinal cord injuries, will also be made.

This study is also important in its relation to the existing body of literature that focuses on employment after the onset of spinal cord injury. First, the literature cited in

the next chapter of this thesis is primarily American. Are patterns of employment among Americans similar to or different from those of Albertans? Are employment rates among Albertans affected by readily available social programs that provide financial support? Second, while some of the correlates that are examined in this study are similar to those identified in American research, others have not been previously investigated. The effects of level of education, age, and gender on employment rates are well documented in the literature. Mode of mobility, rural versus urban residence, and the use of vocational services, however have not been given adequate attention. Therefore, the correlates that affect employment status may be similar to or different from those previously researched. Third, some of the factors that influenced access to employment for the participants in the Abbott (1993) study have not been thoroughly researched before. For example, little to no research has focused on the role of project funded positions in securing full time employment. And offering a flexible work schedule for those who require time to manage personal care needs has rarely been considered a way in which employers can offer reasonable accommodation to persons with spinal cord injuries. Fourth, previous research has incorporated a medical approach in order to make the connection between spinal cord injury and employment. For example, Young, Alfred, Rintala, Hart, and Fuhrer (1994), who researched the vocational status of community members, required that participants undergo a comprehensive physical examination in a rehabilitation hospital in order to determine their level of injury. In contrast, this study takes a social approach where environmental factors are the impetus of enquiry. While participants provided self-report information on their level of injury, their functional abilities and required work site modifications were given primary consideration. Finally, much of the existing research has been theoretical in nature. The present study was empirically based.

In summary, the intention of this study was to develop an understanding of the employment situation among Albertans with spinal cord injuries. The present study was empirical, and the goal of the research was not to develop a theory. However, the information obtained may create opportunities for theory development to occur in a

subsequent study. The research also highlights features of the employment experience that influence the return-to-work process following the onset of spinal cord injury. From the questionnaire responses of a group of working and nonworking persons with spinal cord injuries it is anticipated that certain workplace and individual factors influence activity in the labour market. Such information will be valuable to vocational rehabilitation professionals and policy makers who monitor service provision. Persons with spinal cord injuries may benefit through access to appropriate services and, in turn, labour force involvement.

Research questions.

This study is directed at answering the following question: What is the employment situation among Albertans with spinal cord injuries? A secondary question that will be addressed is: What features of employment facilitate or hinder the access to meaningful employment for persons with spinal cord injuries who reside in Alberta? Finally, are the agents identified as influencing labour force participation of persons with spinal cord injuries similar to those identified in the Abbott (1993) study?

Delimitations and limitations of the study.

The participants in this study were selected on the basis of having sustained a spinal cord injury. Therefore, it is not possible to generalize the results to other disability groups. The results are also not entirely generalizable to the general population of persons with spinal cord injuries. Because some individuals with spinal cord injuries do not engage in a formal hospital rehabilitation program and are therefore not referred to the Canadian Paraplegic Association (the source of the random sample), they may not become members of the Association. Therefore, they were not included in questionnaire distribution.

Because this study was conducted using survey research, several limitations are evident. Limited response rate means that some of the results must be interpreted cautiously. In anticipation of possible low return rates, a large sample (400) of Canadian

Paraplegic Association members was surveyed. However, participants responding to the questionnaire may be more likely to be employed than those who do not respond. Therefore, research results might not be generalizable beyond those who participated in the study. However, a careful comparison of the sample characteristics to other information about the population of persons with spinal cord injuries suggests that the sample may be reasonably representative. Another limitation of the questionnaire results could be in the validity and reliability of the questionnaire. In order to minimize bias in the process of developing questionnaire items and enhance validity and reliability, a participant of Abbott's (1993) qualitative study and other experts in the field were asked for their input.

Summary

An understanding of the employment situation among Albertans with spinal cord injuries and the potential features of employment that may influence access to competitive work, may help to facilitate a change in the long-standing pattern of high unemployment rates for this group. Although some previous studies have examined these factors, very few Canadian studies have been undertaken. Furthermore, these studies have not fully integrated the information for practical use by rehabilitation professionals, persons with disabilities, policy makers, and employers. In order to build on current research, this study examined the factors influencing labour force participation of persons with spinal cord injuries using survey research. In chapter two, a review of the current and relevant literature is undertaken.

CHAPTER TWO
REVIEW OF RELATED LITERATURE

Based on an examination of personal and workplace factors that influence employment following spinal cord injury (an expansion of the Abbott [1993] study) several areas of literature need to be reviewed. Concomitant with the Abbott (1993) study, relevant literature on living with a spinal cord injury will be considered. Changes in physical functioning, psychological adjustment to disability, and vocational development often accompany the onset of traumatic spinal cord injury. An examination of the basis of the work ethic and the traditional role held by persons with disabilities in the world of work illustrates the progress that they have made in spite of prescribed societal roles. Existing physical, procedural and attitudinal barriers that prevent persons with disabilities from entering the work force, however, demonstrate that continued reform is needed. In the literature review I will also examine recent reform measures such as the Employment Equity Act, awareness initiatives, and the provision for vocational rehabilitation for persons with disabilities. A review of the above areas provides a contextual framework within which persons with spinal cord injuries currently exist.

Life After Spinal Cord Injury

Following severe trauma to the spinal cord, the injured person often re-evaluates his/her situation from the perspective of living with a physical disability. Although this re-orientation can be all encompassing, as suggested by Wright (1983), of particular importance in this study are those factors that influence a return to competitive employment. I have chosen to look at the physiology of spinal cord injury, adjustment to disability, and vocational development, as being potentially important to the return to work process.

Physiology of spinal cord injury.

With regard to the physiology of spinal cord injury, Phillips, Ozer, Axelson, and Chizek (1987) identify two factors that influence the outcome of the injury: level of injury and completeness. "The level of injury is important because, in general, the higher the lesion, the greater the loss of function" (Phillips et al., 1987, p.13). Completeness of the trauma plays a role in determining how much function will be maintained after the injury. "When injury is complete there is no measurable neurologic function at and below the level of the cord damage, and usually no movement or sensation below the level of injury. When injury is incomplete, some sensation or movement is retained below the level of injury " (Phillips et al., 1987, p.160).

Understanding the deficits that are typical of the various levels of trauma is important in the issue of employment as functional abilities change with level and completeness of the injury. For example, the difference between complete damage to the cervical (C) area of the spine in comparison to the thoracic (T) region is significant. Taking the extremes, an individual with a C4 lesion accompanied by paralysis of both upper and lower extremities may utilize highly sensitive technical aids in accessing his/her environment (Lee, Ostrander, Cochran & Shaw, 1991). Injury at the level of T1, however, rarely affects hand function. Therefore, independence in the physical environment is more likely due to the abilities of the upper body. A review of the functional outcomes of paraplegia and quadriplegia further sets the stage for how access to employment may be affected.

Paraplegia most often results from traumatic injury to the lumbar (L) and thoracic (T) regions of the spine, whereas quadriplegia "is defined as damage of neural elements within the cervical segments of the spinal canal" (Lee et al., 1991, p. 268). Categorization of individuals with an assault to the spinal cord or surrounding tissue is typically conducted by level. However, paralysis varies with degree of completeness of the injury. Therefore, an individual may sustain a paraplegic or quadriplegic type injury and maintain the ability to walk because of the degree of completeness of the injury. In order to understand the unique needs that may affect functional ability as it relates to

employment, the following injury classifications will be briefly examined: paraplegia- L5-S2, L1-L4, T7-T12, and T2-T6, and quadriplegia- C1-C4, C5, C6, and C7-C8.

Injuries in the lumbosacral levels (L5-S2) initially cause impairments in bowel and bladder function and walking (Lee et al., 1991). With appropriate treatment, however, independent bowel and bladder management can be achieved and walking with assistive devices is often possible. Lumbar trauma at the L1 through L4 vertebrae usually means that wheelchair mobility is required for long distances. However, walking capabilities for short distances are often restored. Bowel and bladder function are also independently managed.

Thoracic-level injuries are more severe as wheelchair mobility often results. Impaired bowel and bladder function can be managed independently by the injured person. With T7-T12 injuries brace walking is used for exercise purposes, whereas for spinal cord damage at T2-T6, ambulation is almost always accomplished by way of a manual wheelchair.

Individuals who receive an injury at levels C1 through C4 are considered "high" level quadriplegics and may (if the injury is complete) require head controlled power mobility, sophisticated electronic equipment, and technical aids for activities of daily living and employment (Lee et al., 1991). Breathing is initially severely affected and the use of respirator equipment is often required. Because the individual is physically dependent (due to the paralysis of both the upper and lower extremities), the work environment may need to be equipped with technical devices such as environmental control units and robotic arms. Such accommodations will allow the person with the disability to better perform his/her work tasks (Phillips et al., 1987).

Spinal cord injured persons with lesions at the C5 level typically have functional deltoids and/or biceps (Lee et al., 1991). An orthotic device, such as a splint, allows for the propulsion of a power wheelchair with the hand as well as completion of tasks that involve writing and typing. However, physical dependence may remain for transfers, dressing, and personal hygiene (Phillips et al., 1987).

An injury at the C-6 level is usually manifest as paralysis of upper and lower

limbs, however, activities of daily living are more easily achieved than for those individuals with higher level injuries. According to Phillips et al., (1987), "complete independence is achieved in eating, writing (although slower than usual), and driving" (p. 28).

Almost all people with injuries of the C7-C8 level "become completely independent in all functions consistent with living alone. Independent mobility is by wheelchair. For some people, however, personal hygiene may require partial physical assistance, transfers may require standby assistance; and dressing may require partial physical assistance" (Lee et al., 1991, p. 25).

It is apparent from the above discussion of injury site that functional ability may present challenges in the search for employment, the way in which job-related tasks are completed, and the maintenance of long term competitive employment. Thus, this cursory review of spinal cord physiology brings context to understanding potential work site issues.

Coping with physical disability.

Recent psychosocial literature has turned to questioning the stage theory of adjustment to physical disability. In a thorough review of studies conducted prior to the 1970's, Trieschmann (1988) indicated that the stage theory of adjustment is unsubstantiated as "no data have been presented (in any of these articles) to demonstrate reliably and validly the existence, sequence, or duration of these stages" (p. 69). The hypothesized stages that Trieschmann (1988) was referring to are: denial, depression, dependency, hostility, and accommodation. Furthermore, several researchers (Trieschmann, 1988; Vash, 1981; Wright, 1983) have noted that despite earlier claims in the research on adjustment to disability, depression is not apparent among most individuals with spinal cord injury (with the possible exception of during the acute treatment phase). Trieschmann (1988) adds that "actually, most people do very well with this (the physical reality of disability), since, in actuality they have very little choice" (p. 291).

Although previous stage theory has been contested, current research appears to support the process of coping with spinal cord injury as a long-term matter (Green, Pratt, & Grigsby, 1984; Mayer & Andrews, 1981; Trieschmann, 1988; Vash, 1981; Wright, 1983). Other points of agreement seem to be that one's identity is challenged as a result of the onset of physical disability, and variability of reaction to spinal cord injury occurs as a result of the unique situation of each individual (Mayer & Andrews, 1981; Trieschmann, 1988; Vash, 1981; Wright, 1983). Each of these facets of the coping process will be briefly discussed below.

With regard to an alteration to one's identity, Trieschmann (1988) indicates that "the process of coping with the disability involves letting go of some 'I am's' and developing other ones about which the person can feel good" (p. 291). This notion is demonstrated in the value changes in acceptance of disability (Wright, 1983) and in Mayer and Andrews (1981) discussions of changes in self-concept.

According to Wright (1983), individuals in the process of accepting physical limitations will reframe the disability as nondevaluating. This process entails an initial period of crisis when the individual utilizes his/her resources to fight the physical and psychological damage that he/she has experienced. Following the crisis phase, individuals with disabilities will engage in the process of value changes. Wright (1983) proposes that the individual will enlarge the scope of his/her values such that one appreciates "the existence of new values in addition to the one(s) lost" (p.163). From this juncture, the individual with a physical disability will position other values above his/her changed physique. For example, "physical appearance matters less than personality" (Wright, 1983, p. 171). Finally, value changes entail containing the effects of the disability. "Perceiving disability as an impaired tool helps to contain disability effects" (Wright, 1983, p. 176). This suggests that the individual is able to substitute an action or image of him/herself for another. In essence, an identity change occurs.

Mayer and Andrews (1981) recognize the value changes proposed by Wright (1983) and relate the effects of spinal cord injury to an alteration of one's self perception. "It would seem that a person's life meaning could be radically altered by a spinal cord

injury, and that an essential change in life meanings could strongly affect the individual's adjustment process and self-concept" (Mayer & Andrews, 1981, p. 135).

In the qualitative study by Mayer and Andrews (1981), participants indicated positive, negative or no change in perceived life satisfaction at the onset of spinal cord injury. Extending self perception to coping with disability, Mayer and Andrews (1981) proposed that self-concept may change according to the above life satisfaction states. They concluded that "the positive change group perceived their disability as a challenge or facilitator of personal growth, giving them the opportunity to re-examine their lives and to enhance their spirituality" (Mayer & Andrews, 1981, p.137). In contrast, the negative change group saw the disability as a "barrier that could not be overcome" and were unable to redefine their goals (Mayer & Andrews, 1981, p. 137). Interestingly, the no change group, as described by Mayer and Andrews (1981), perceived the disability as an obstacle requiring a refocusing of goals that had been established prior to injury. In other words, value changes may have occurred, allowing for one quality to be substituted for another in the achievement of goals. Finally, Mayer and Andrews contend that the perception of disability as a facilitator, obstacle, or barrier supports the notion that perceptions of disability are central to self concept.

In addition to changes in self perception as described by Mayer and Andrews (1981), Vash (1981) indicates that reactions to disablement (an integral part of the coping process) are varied. She recognizes four classes of reaction determiners: "a) those emanating from disability itself, b) those linked to the person who becomes disabled, c) those present in the person's immediate environment, and d) those that are part of the larger cultural context" (Vash, 1981, p.3). Vash also acknowledges the importance of spirituality as a contributing factor in the reaction to the onset of physical disability (Vash, 1994). Trieschmann (1988) echoes Vash (1981) by saying "there will be a tremendous diversity of reaction to SCI because of the unique combination of psychosocial (P), biological-organic (O), and environmental (E) variables that each person represents " (p. 289).

It was the experience of participants in the Abbott (1993) study that in the process

of coping with disability, an altered self-concept emerged. Furthermore, changes in one's identity seemed to be related to the employment re-entry process. The results of this study seemed to imply that the physical limitations imposed by the onset of the spinal cord injury led to the development of an altered sense of self. The form of this new identity appeared to be affected by the physical self, the social self, and the psychological self. Environmental barriers and personal care requirements seemed to be aspects of the physical self that challenged participants in the return to work process. Considerable expenditure of energy in the completion of work and daily living activities and the frustration of accessing the environment from a wheelchair presented barriers to entry into the labour force. The strength of the social self also seemed to be important to the experience of re-entering the work force (Abbott, 1993). Participants who were encouraged by peers, guided by social service and vocational rehabilitation agencies, and supported by friends and family, generally had a sense of who they were as persons with disabilities. This, in turn, seemed related to their success in the labour force. Finally, participants described the challenge of living with a physical disability as an adjustment that entailed coping strategies from the time since onset of the spinal cord injury to the time of interviewing. Thus, the psychological self seemed to be viewed by participants as critical to the employment re-entry process.

In summary, the Abbott (1993) study appeared to support Trieschmann's (1988) notion that coping with physical disability is an interactive process involving personal, social, and environmental variables. Therefore, coping with physical disability will vary according to the unique world in which the individual lives. This is why internal and external factors that influence the person with a disability will be considered. As well, the ever-changing nature of psychosocial, biological-organic, and environmental variables (Trieschmann, 1988) implies that coping with physical disability will entail a lifelong process.

Given that coping with disability may entail a lifelong process, work could be crucial to self concept and self esteem (Young et al., 1994). In contrast, society may create additional pressures on persons with disabilities who do not work as they may not

be perceived as contributing members. Therefore, developing a healthy sense of self may be hampered by inactivity in the labour market. According to Krause (1992), adjustment to life after the onset of spinal cord injury is affected by the involvement in work. Using data obtained from the Life Situation Questionnaire (Krause, 1990) the researcher compared adjustment levels of employed and unemployed respondents with spinal cord injuries. The employed group reported superior adjustment when compared to the unemployed group. Krause (1992) concludes that employment is a marker for adjustment to life after the onset of spinal cord injury. Thus, since employment is an activity that individuals are expected to partake of in adulthood, it is likely that coping with disability may be an integral aspect of the return-to-work process following severe spinal cord injury. Although the literature fails to provide a set of stages in the coping process, attention must be given to facets of one's life that might influence self-concept and ability to accommodate to disability in everyday living. In conclusion, current literature identifies coping with disability as a varied and lifelong process. With this in mind, it is anticipated that coping issues will influence the return-to-work process.

Vocational development.

Several studies (Alfred, Fuhrer, & Rossi, 1987; Curnow, 1989; Goldberg & Freed, 1982) indicated that the onset of physical disability alters vocational development. The above researchers concurred that in some way the career planning and implementation process is arrested or retarded upon injury. As summarized by Alfred, Fuhrer, and Rossi (1987), "vocational development is disrupted at the time of severe spinal cord injury and plummets to a low level" (p. 856). Even two years after discharge from hospital, vocational development is lower than before the injury (Alfred et al., 1987). According to Conte (1983), the newly acquired disability is disorganizing and the self-concept is dramatically challenged.

With attention to the notion of disrupted career development and altered self-concept, Navin and Myers (1983) reviewed vocational theories and their regard for the issues of persons with disabilities. The above researchers found that rehabilitants have

been disproportionately placed in the secondary labour market and that prominent vocational theories do not specifically address the needs of this group (Navin & Myers, 1983). Hence, in terms of vocational rehabilitation "the application of each theory to disabled persons has been left to the discretion and interpretation of the individual counsellor" (Navin & Myers, 1983, p.41). As a result, it is expected that vocational rehabilitation counsellors have been ill-equipped to deal with peripheral issues that may have a significant impact on vocational growth. Prior to discussing a lifespan model of career development proposed by Navin and Myers (1983), I provide the following background.

In formulating a model of career development for persons with disabilities, Navin and Myers (1983) reviewed the historical roots of vocational guidance, two well known career development theories, and incorporated the contributions of developmental psychology. Recognizing Parsons as beginning a movement for vocational assistance in the United States, Navin and Myers (1983) acknowledge his contribution of "true reasoning" in the career development process. In review, Parsons (cited in Navin & Myers, 1983) identified an assessment of one's aptitudes and abilities as the first step in career development. This assessment is then followed by a review of occupations. Parsons proposed that "true reasoning" occurs by connecting steps one and two in making a vocational choice. This reasoning-based career assessment became an integral part of their model.

In addition to the work of Parsons, Navin and Myers (1983) reviewed the trait and factor approach to career development as well as the theory of career typology. They concluded that although these approaches to career development provide some assistance to persons with disabilities, the approaches may not adequately reflect their needs. According to Navin and Myers (1983) the trait and factor theory has had a "practical application in the rehabilitation process" of adults with physical disabilities (p. 41). By matching capabilities to positions, restructuring and modifications can be implemented (Navin & Myers, 1983). Holland's (1973) career typology can also be applied to persons with disabilities (Navin & Myers, 1983). The career typology involves matching

personality types with occupational environments. However, as the authors state "no attention is given to potential personality change, or even disruption, following disability" (Navin & Myers, 1983, p. 41). As a result, they turn to Super's (1972) developmental theory of career exploration.

According to Navin and Myers (1983), Super addressed the issue of self concept in the development of one's career. They concluded that this approach acknowledges lifespan changes that may encompass an alteration in physical functioning. Furthermore, Navin and Myers (1983) present their own model for occupational exploration and development that encompasses Parsons' notion of reasoning and Super's concept of a lifespan approach. Their model is characterized by four distinct phases that operate in a cyclical fashion.

The initial phase in career development involves the understanding and acceptance of one's self. Since self-concept develops and is ever-changing it is usually thoroughly examined at the onset of physical disability. Navin and Myers (1983) indicate that the traumatic onset of disability in adulthood may require the individual to "revert to a former stage of development in order to reformulate a positive self-concept and a new self-acceptance" (p. 42).

Phase two involves career exploration and is affected by personality characteristics, available opportunities, and socioeconomic status. At the onset of spinal cord injury "...the adult may be unable to engage in career exploration until satisfactory resolution of the preceding stage, self-acceptance, is achieved" (Navin & Myers, 1983, p. 42). Consequently, recognition of coping with disability and redefinition of self are important in vocational development.

Phase three involves the identification with a career self-concept and selecting a vocation that matches one's abilities, personality, and values (Navin & Myers, 1983). The fourth stage in this model is the reevaluation of the chosen career. In keeping with a lifespan model, the ever-changing self concept will lead to a continual reexamination of the employment situation.

Although it appears that the vocational development of persons with acquired

disabilities has been adequately examined, it is evident that the research has focused primarily on the employment situation of Americans. Little research has been conducted around the employment situation of Albertans and/or Canadians with acquired disabilities. It is therefore important to examine whether employment differences exist between Canadians and their American counterparts. Perhaps the differences in population size in urban and rural communities across the United States and Canada have an impact on employment rates for persons with disabilities. Employment rates might also vary across the two countries because of differing social programs, with Canada historically offering a greater degree of financial security to the unemployed.

As noted earlier, in addition to spinal cord injury affecting personal factors such as levels of physical functioning, self concept and the development of one's vocation, external barriers may complicate the return-to-work process. Prior to discussing these barriers, I provide a review of the historical basis of the work ethic and the traditional role of persons with disabilities in the labour sphere in order to provide context for their current situation.

Disability and Work in Historical Context

In an attempt to understand the basis of prevailing attitudes associated with the employment of persons with disabilities, it is helpful to briefly review the historical basis of the work ethic and the traditional place held by this group in the labour force. This historical examination illustrates the disadvantaged position previously held by persons with disabilities in the work force and suggests that progress is being made.

The evolution of the meaning of work has differed through time and across societies (Schneider & Ferritor, 1982). Hunting and gathering societies placed a great deal of emphasis on the importance of kinship groups. As a result, the concept of work held little meaning as there was essentially no distinction made between work activities and the chores of daily living. Schneider and Ferritor (1982) pointed out that "when illness, disability, or personality factors prevent persons from working, others increase their workload to sustain the group" (p. 28). Such cohesion served to strengthen kinship

ties and further decrease the distinction of "work" within the community.

As societies developed more complex economies characterised by agricultural and pastoral systems, new methods of subsistence and social organization emerged. The division of labour evolved with an emphasis on social status and position within the community (Hagedorn, 1983). The development of "work" as a formal concept was further exemplified during the period of industrialization. During the early period of capitalism, the Protestant Ethic, as postulated by Weber (1947), defined a new doctrine that altered the importance of work in society. The Protestant Ethic described work as a central aspect of human existence (Schneider & Ferritor, 1982). Along with an ideological change, the expansion of mechanization and centralization of work (e.g., factories as a place of employment) were structural modifications that perpetuated the emergence of alternate familial roles in the production process. Rather than the family labouring cooperatively in the kinship unit, the breadwinner provided economic security through outside employment. The factory environment discouraged participation of workers with disabilities by assuming that production needs could only be met by those who were able-bodied. Not only was the work site inaccessible, the physical characteristics of persons with disabilities did not match the norm, which inferred they were incapable of performing necessary job duties (Schneider & Ferritor, 1982).

Daniels (1981) distinguishes between competitive and non-competitive employment - - concepts which are valuable in this discussion. Competitive employment, such as factory work, defines the worker by job characteristics and socio-economic status. In contrast, non-competitive employment entails "... functions essential to the fabric of society, culture, and economy performed daily without supervision and with no direct remuneration" (Daniels, 1981, p. 171). Persons with disabilities, if able to do so, have historically participated in non-competitive rather than competitive employment. In societies where productivity levels were high in comparison to the population, protection of persons with disabilities and limited social participation (e.g., non-competitive employment) was commonplace (Wright, 1983). Thus, with persons with disabilities exempt from typical adult social roles, they were perceived as "perpetual

child, patient/invalid, curse or blessing from God" and consequently had little place in the world of work (Driedger & D'Aubin, 1991, p. 10).

During the time of the two World Wars, persons with disabilities challenged the typical pattern of exclusion from competitive employment. However, this advancement was relatively short-lived. Spinal cord injuries (SCI) suffered by World War I veterans were severe with more than 80% of them ending in death following the first year of onset. However, the advent of sulpha drugs in the 1930's and antibiotics in the 1940's inspired paraplegics to "mobilize themselves out of bed, become personally independent and lead useful, economically rewarding lives" (C.P.A., 1990, p. 8). Thus, when able-bodied men were conscripted in World War II, women and persons with disabilities were able to enter vacated jobs and jobs created by the war (Vash, 1982). In spite of the establishment of the Canadian Paraplegic Association (under a Charter of the Dominion Government in 1945), whose mandate was to assist SCI veterans, advocacy for health services took precedence over employment. Hence, when a soldier returned as "Rodney the Riveter", a disabled machinist, he was likely displaced to ensure employment for the able-bodied worker. Typically, this displaced segment of the community either returned to the secondary job market or joined the unemployed (Schneider & Ferritor, 1982; Vash, 1982).

With unemployment creating feelings of inadequacy at a personal level, a sense of powerlessness may ensue. Driedger and D'Aubin (1991) suggest that a self-fulfilling prophecy may emerge as a result of these feelings. The traditional exclusion of persons with disabilities from the means of production further magnifies this powerless stance with the individual experience being enacted at a societal level. Vash (1982) took a unique economic approach to this problem when she argued that:

> role stereotyping has proven to be a highly effective way of prescribing the labour market. It also serves to keep certain targeted groups in work roles that are considered undesirable by those who wish to occupy the prime labour market; keeping... minorities in needed but boring, low paying labour may be as valuable (for those in power) as keeping them out of the good jobs (p. 199).

However, the ever-changing composition of the North American population (Krahn, 1991; Lindroth, 1982; McKay, 1991), and the increasing visibility of persons with disabilities, will undoubtedly foster consideration of non-traditional sources of labour by employers who require skilled workers.

In 1991, 15.5% of Canadians reported some level of disability (HALS, 1992). "The Health and Activity Limitation Survey uses the World Health Organization's definition of disability which is; ... any restriction or lack (resulting from impairment) of ability to perform an activity in the manner or within the range considered normal for human beings" (HALS, 1992, p. 2). Respondents to the HALS survey were asked questions regarding their daily living activities to determine the presence of disability. Since their perception of disability is the tool for reporting, the survey recognizes the possible subjective bias of the data. In spite of this methodological difficulty, disability among Canadians seems increasingly more common. In part, this growth in reported disabilities may be explained by an aging population. Moreover, attention is being focused on this group as the average Canadian foresees eventual membership among the disabled community. With a stronger voice, persons with disabilities may therefore challenge stereotypical roles in the process of accessing competitive employment.

Vash (1982) indicated that stereotyped roles and subservient behaviour that have been lived with for generations "become socio-culturally the natural order" (p. 199). With altered demographics (e.g., an aging population) the social construction of disability is changing. Subtle, yet important, nuances such as terminology indicate the spirit of this change. Using respectful and accurate vocabulary when referring to persons with disabilities seems important to full integration. Terms such as disability, physically challenged and differently-abled have replaced derogatory phrases such as the handicapped, crippled and insane. Thus, the stigma attached to the disability is being softened through a transformation in the social construction of the term. However, longstanding attitudinal barriers may continue to deter the employment of persons with disabilities. It will be demonstrated that such false convictions are historically grounded and indirectly perpetuate physical and procedural constraints within the workplace.

The Challenge of Barriers

Debilitation, inferiority, incapability, and general stigmatization are characteristics of an established foundation of attitude formation regarding the attributes of persons with disabilities (Bolton, 1982). Such stereotypes in everyday life are transferred to the workplace and result in prejudice and discrimination. For example, when considering a worker with a disability for employment, the interview is often focused on the disability rather than on job-related abilities (Bergeron, 1991). Current statistics indicate that the unemployment rate for persons with disabilities is overwhelming and obtaining work is in part related to the untruths that employers (and society in general) hold regarding the capabilities of this group.

Qualitative and quantitative studies (Bergeron, 1991; Goff Condon, 1987; Lester & Caudill, 1987; McCarthy, 1986; Parker & Hansen, 1981; Roth & Sugerman, 1984; Schweitzer & Deely, 1982; Thomas & Thomas, 1985) have examined the barriers to employment experienced by persons with disabilities, indicating that attitudes permeate both the physical conditions of the work situation as well as the procedural regulations that guide the organization. According to Roth and Sugerman (1984), unnecessary repression results from the unknowing society that discriminates against workers with disabilities. To this end, the barriers to employment will be reviewed.

Attitudinal barriers.

Attitudinal barriers have been categorized as myths, syndromes, and stereotypes that deter labour participation or relegate disabled persons into less than desirable occupations (Goff Condon, 1987; Lester & Caudill, 1987; Nathanson & Lambert, 1981). It is apparent that such barriers exhibit economic, situational (socially based) and/or affective underpinnings that motivate discriminatory hiring and promotion practices.

Economically-based barriers are discussed by Lester and Caudill (1987) in a review of the myths of the worker with a disability. The most frequent reason given by employers for failing to recruit persons with disabilities is the misconception that they will demonstrate high rates of absenteeism and a lack of loyalty to the organization

(Lester & Caudill, 1987). However, the United States Office of Vocational Rehabilitation estimates that 55% of workers with disabilities have better attendance records than non-disabled workers (reported in Lester & Caudill, 1987). This estimate is supported by Muklevicz and Bender (1988), who indicated that 39% of employers in their survey sample rated employees with disabilities as more punctual (with 40% rated as the same) than their able-bodied counterparts.

Many employers also incorrectly assume that workers with disabilities will jeopardize company safety records by engaging in unsafe work habits that facilitate additional injury (Lester & Caudill, 1987). Physical features of the work site are the primary factors reflected in this assumption. Lester and Caudill (1987) reported that when they asked workers with paraplegia why managers perceive a safety risk in hiring persons with disabilities, the explanation given was that "mobility and safety are directly related. Further, non-handicapped people often cannot imagine how the handicapped worker is able to manoeuvre" (p. 51). An unsteady stride, perhaps a functional characteristic of a quadriplegic with an incomplete injury, while manoeuvring in the job site might be perceived as a safety risk to the employer. This risk is assumed to be associated with a monetary loss as a result of inflated insurance premiums. However, "ninety percent of nearly 3,000 firms surveyed by the U.S. Chamber of Commerce and the National Association of Manufacturers indicated no measurable effect on insurance premiums as a result of employing the disabled" (Lester & Caudill, 1987, p. 51). Accident records have also shown that 98% of employees with disabilities have better or similar safety records compared to their able-bodied counterparts (Muklevicz & Bender, 1988).

Another common myth is that productivity levels are reduced for persons with disabilities (Lester & Caudill, 1987; Schweitzer & Deely, 1982). This myth may be grounded in the relegation of persons with disabilities to the field of non-competitive employment. The participation in make-work projects (for example, rug-hooking) has historically removed this group from the mainstream economy. As a result, their role in the production process has been devalued. With few expectations for productivity and

a lack of visibility in the workplace, persons with disabilities have traditionally been unable to demonstrate their job skills. Acceptable levels of productivity, however, are generally maintained for those who penetrate the barriers. In fact, Lester and Caudill (1987) illustrated that approximately 25% of workers with disabilities have superior, and 66% have similar, job performance records in comparison to non-disabled workers.

Johnson, Greenwood, and Schriner (1988), through personal interviews with employers, found that productivity is the single most important factor attributed to successful employment. Since productivity is the fundamental basis of all business, physical limitations and their possible effect on performance (if any) cannot be ignored. Job accommodation, should not, however, be assumed to be a financial burden to the employer. In this regard, Schweitzer and Deely (1982) pointed out that "most disabled people will need no accommodation at all" (p. 208). For modifications or assistive devices to ensure efficient mastery of work-related tasks, minor adaptations that provide accessibility at little cost (for example, a lever door handle or a mouth-stick for typing) may be employed.

Attitudinal barriers that are motivated by "bottom line" considerations are often cited as reasons for overlooking persons with disabilities for potential employment positions. Moreover, employers also hold socially constructed stereotypes about the competency of workers with disabilities.

Schweitzer and Deely (1982) referred to paternalistic attitudes and social rejection as having a negative impact on the work environment. Given the traditional role that persons with disabilities have played (as indicated by Schneider & Ferritor, 1982), it is conceivable that they are perceived as helpless and dependent, and are often segregated from the mainstream workforce. Nathanson and Lambert (1981) also outlined a series of syndromes that parallel the paternalistic attitudes and exclusionary behaviours described above. The "don't worry, I'll protect you" syndrome, for example, assumes that the employee is defenceless and in need of assistance. In turn, employers may incorrectly conclude that a staff member with a disability will require additional attention from others (and that a capital loss may be incurred as a result). An intolerance on the

part of a few employers rather than demanding employees may be at the root of the problem (Lester & Caudill, 1987). Thus, false perceptions may result in behavioral outcomes that are discriminatory in nature.

Finally, Lester and Caudill (1987) noted that employers may perceive persons with disabilities as being an embarrassment to the organization. If employees with disabilities have high levels of productivity, attendance and punctuality, and are willing to work hard, as suggested by Muklevicz and Bender (1988), why would employers be uncomfortable with their presence in the workplace? Daniels (1981) explained this discrepancy by referring to stereotypical attitudes. Because people with disabilities deviate from the norm (what society believes to be acceptable relates to physical normality, with an emphasis on beauty), they are viewed as inadequate and unworthy of integration.

Hence, social segregation rooted in preconceived notions of the role of the disabled in society seems to destine them to exclusion from the workplace. As indicated earlier, the social construction of disability is changing. With an aging population and increased membership in this group, the stigma attached to disability is gradually being eroded. Along with this erosion, it is hoped that the integration of persons with disabilities into the workplace will increase. Fundamental economic restructuring (for example, the reliance on part-time rather than full-time workers) may also force employers to view workers with disabilities as an asset rather than an embarrassment to the organization. Accordingly, social constraints regarding the employment of persons with disabilities may be altered as a result of the human resource needs of the organization and the composition of the potential labour force.

In addition to attitudinal barriers that are founded in perceived economic and social constraints, affective underpinnings may perpetuate such attitudes. Personal reaction to individuals with disabilities can be patronizing and in turn detract from a recognition of their abilities. Nathanson and Lambert (1981) stated that:

> no matter how well-trained, sensitive, well-meaning, or objective they may be, supervisory and managerial personnel, line-workers, and other professional and non-professional staff are not immune to holding biases,

> beliefs, or prejudices about persons who are disabled. These feelings and thoughts, deeply and often subconsciously rooted, are carried into daily interactions with disabled employees and can have a profound effect on their social and vocational integration into the business community (p. 110).

Unfortunately, latent barriers of ignorance and fear often accompany external obstacles that lead to prejudice and discrimination (Vash, 1982). Attitudinal barriers that prevent access to employment for persons with disabilities are difficult to permeate as they indirectly perpetuate physical and procedural restraints within the workplace.

Physical barriers.

Physical barriers typically inhibit entrance to, or productivity within, the workplace (McLoughlin, Garner, & Callahan, 1987). The most obvious barrier of this kind is accessibility. Stairs leading into the place of business are problematic for those with mobility impairments. Notwithstanding other requirements of the job, these individuals are immediately disadvantaged in gaining access to potential employment because of their physical disability.

For those who are able to access the building, the workplace may lack "appropriate washroom facilities and equipment that can be used by someone with a disability" (Agocs et al., 1992, p. 56). For example, the failure to accommodate the special needs of a visually impaired worker (for instance, the availability of a magnifier for reading) may lead to decreased productivity and may erect barriers to career advancement. In order to examine this issue, Roessler and Rumrill (1995) studied the relationship of work site barriers to job mastery and job satisfaction among persons with multiple sclerosis. Fifty individuals were solicited through local Multiple Sclerosis Society Chapters in Indiana and Kentucky, United States of America. Results of the Work Experience Survey indicated that the number of barriers was related to the number of job mastery problems, the number of barriers was inversely related to job satisfaction, and the number of job mastery problems was inversely related to job satisfaction. Thus, not only do physical barriers to work site access and lack of reasonable accommodation

create employment opportunities for persons with disabilities that are unequal to those of their able bodied counterparts, job mastery may be impeded and work satisfaction lowered.

As well as reduced opportunity in the employment arena, education and training facilities that fail to consider accessibility and/or the need for assistive devices may deter the development of necessary job skills. In a review of the Employment Equity Act (1986), employers indicated that they "are not turning away qualified members to fill available positions. Witnesses stated that the gap between available skills and job requirements had grown in the general population, but particularly for members of the designated groups" (House of Commons, 1992, p. 31). Although this is not due solely to the physical barriers of the training site (for example, individuals with disabilities may not be eligible for vocational training support), access to upgrading is limited. Conversely, for those who attempt to develop career positions, training is typically done over an extended period of time because of the challenges presented by the learning environment. Thus, in either case the worker with a disability seems to be disadvantaged in the marketplace.

Procedural barriers.

In addition to the attitudinal and physical barriers that prevent access to jobs for persons with disabilities, procedures that guide the organization often deter the participation of this group. "Procedural barriers are often more intractable to change than either attitudinal or physical barriers because they require the alteration of a system as opposed to a situational modification or individual change" (Daniels, 1981, p. 186). It is argued, however, that attitudinal change of individuals within the structure is required for procedures of the organization to be altered. It is initially important to understand what procedures in the organization present as barriers to employment.

Guidelines that regulate the operation of the organization often create barriers to employment for persons with disabilities.

Work places are typically organized on the assumption that all employees

> are able-bodied, healthy, independent individuals who can work within a given time frame which suits the production needs of the workplace. Workers are expected to be flexible enough to cope with night shifts, overtime, and last minute changes to the working timetable (Agocs et al., 1992, p. 64).

For a worker with quadriplegia who requires assistance with personal care and utilizes specialized public transportation, such policies of the workplace are problematic. A job that requires shiftwork or last minute schedule changes may therefore not be an option for this individual.

Traditional job descriptions that specify the duties of the position may not allow for the accommodation of differences. Thus, equal employment opportunities do not exist. If, for example, certain techniques are required to complete a task and a worker with a disability is unable to use that technique due to a functional limitation, accommodation may not be awarded. An organization's recruitment and selection practices can further limit opportunities for employment. "An assumption of disability rather than an assumption of ability can result in screening out persons with disabilities" (Agocs et al., 1992, p. 62). Therefore, prejudice and discrimination can be fostered through company policy and the values of the organization.

In addition to limiting the opportunity for employment, procedural barriers may stymie the career development of the worker with a disability. Promotion policies set up systemic barriers for this designated group "by failing to allow some flexibility" for personal care needs or assistance at the work site (Agocs et al., 1992, p. 65). When promotion involves an increase in working hours or extensive travel to inaccessible work sites, qualified candidates with disabilities may be overlooked. Rather than employers attempting reasonable accommodation, stereotypes that designate persons with disabilities outside of the primary production process reappear.

At a procedural level, company policy may be unknowingly biased as those who prescribe it hold values and attitudes that are prejudicial. Corporate representatives in positions of power can therefore perpetuate discrimination in employment by erecting attitudinal, physical and procedural barriers that serve to disadvantage workers with

disabilities. Agocs et al. (1992) suggested that fundamental change reflecting the life experiences of persons with disabilities will promote the erosion of these barriers. Using the information that will be obtained in the present study, a better understanding of the effects of these barriers in accessing employment for persons with spinal cord injuries will be achieved. It is anticipated that such knowledge will better prepare vocational rehabilitation professionals, their clients, and employers in the implementation of equal opportunity employment.

Measures to Reverse Unemployment for Persons with Disabilities

As stated earlier, the role of persons with disabilities in the workforce has historically been limited to positions outside of the primary labour market. However, demographics indicate that Canada's population is aging and persons with disabilities are challenging entrenched stereotypes that have previously excluded them from the "breadwinner" role. Economic necessity for skilled labour, an aging worker who is likely to experience disability, and the increasing visibility of persons with disabilities in society, are factors that contribute to the importance of employment equity. In order for persons with disabilities to succeed economically in our community they must experience access to competitive employment and career development. "Neither will they be able to participate in decision-making or wield influence or power if they are not part of organizational life in Canadian society" (Agocs et al., 1992, p. 11-12).

Although Canadians with disabilities have been excluded from the economic system, public policy, vocational rehabilitation, and awareness initiatives have initiated change at an individual level, within organizations and in the larger society. Unemployment rates, however, indicate that progress has been slow.

The Employment Equity Act.

Federal policy directed at overcoming discrimination and removing barriers that prevent equitable hiring has attempted to correct the disadvantage in employment for persons with disabilities. Bill C-62, an Act respecting equitable employment, proposes

to "achieve equality in the workplace so that no person shall be denied employment opportunities or benefits for reasons unrelated to ability" (House of Commons, 1986, p.1). The Employment Equity Act (1986) applies to federally regulated employers and Crown corporations that employ in excess of one hundred workers. Organizations under the jurisdiction of the Act are regulated to plan strategically to employ a representative workforce and report their progress to the Minister of Employment and Immigration. Employers who do not comply with reporting procedures can be fined. However, "there are no sanctions for failing to implement other provisions of the Act" (Agocs et al., 1992, p. 3). For example, reasonable accommodation of differences, a provision of the Act important to the integration of persons with disabilities, may not be attended to by the employer. Lip service may therefore be paid to the Employment Equity Act (1986) by filling positions with individuals who require minimal accommodation rather than with the most qualified applicant. To some degree this may explain the greater increase in participation of women in the labour force in comparison to persons with disabilities. An evaluation of the Employment Equity Act (1986), undertaken by a Review Committee in the House of Commons, identified other problem areas.

In 1988 a review of the Employment Equity Act (1986) considered the feedback of government officials, employers, and members of designated groups. The report of the Review Committee recognized the need for increasing access to employment through strategic planning. However, differences emerged with regard to the nature and content of the plans (House of Commons, No. 19, 1992).

Employers indicated support for the current legislative system that is free from quotas. This system allows for the development of hiring strategies geared to match the demands of individual businesses. "In their view, because employment equity forms such an integral part of an organization's human resource and strategic planning process, the organization itself is in the best position to determine what form of employment equity program is required" (House of Commons, No. 18, 1992, p. 11). Given that persons with disabilities have traditionally been excluded from positions with decision-making power, they may be excluded from this process. Organizational values that are biased

in favour of white, able-bodied males might therefore be perpetuated rather than altered to encompass the worker with a disability.

The relegation of strategic planning for employment equity to a designated sector of the organization (for instance, the human resource department) also seems to compartmentalize the issue. Symbolically it appears that top management is committed to the concept of employment equity, but implementation may be carried out at a level removed from this group. The risk here is that in an attempt to achieve a representative workforce, placement at any cost may be the result. For example, designated groups may be hired for temporary work or in positions of low pay as a means of enhancing the company's profile for a reporting period. During the review, employers also recognized that in certain occupations representation of designated groups is low. Rather than proposing to increase overall participation, however, it was suggested that efforts should be concentrated only where groups are under-represented (House of Commons, No.18, 1992). This band-aid approach seems problematic as the token employee with a disability, who is hired for the targeted position, may be perceived as a recipient of pity and not as a qualified applicant. As well, the perpetuation of negative stereotypes may result as workers with disabilities are denied the opportunity to demonstrate their skills. In turn, the organization might inadvertently discourage career development. Keeping workers with disabilities in jobs of low pay with little visibility also means that they are unable to act as mentors for others who enter the system.

When stakeholder groups were asked for their feedback on the Employment Equity Act (1986), witnesses suggested that coverage be extended to encompass a wider range of employers. The current legislation governs Crown Corporations and 370 federally regulated employers. Although the Employment Equity Act (1986) has worked to increase opportunities for employment, its restricted scope may suppress the importance of issues such as discrimination and disadvantage. A greater coverage of the guidelines for equitable hiring might further increase the opportunities available to all designated groups. Should an expansion of the Employment Equity Act (1986) occur, it is expected to challenge existing attitudes regarding the role of workers with disabilities

in Canadian society.

In anticipation of expanded public policy, the development of skilled workers with disabilities and a level of awareness that will encourage integration, seems necessary. Perhaps through the assistance of vocational rehabilitation professionals and further education, increased employment participation can be realized.

Vocational rehabilitation.

The provision of vocational rehabilitation services for persons with disabilities may better prepare this group for access to competitive employment. As reported by witnesses during the review of the Employment Equity Act (1986), skilled workers to fill targeted positions are not readily available (House of Commons, No. 18, 1992). In fact, the Health and Activity Limitation Survey (1991) indicated that 58% of Albertans with disabilities only possess a high school level education. Given that a considerable number of these Albertans may be seniors, who may not have advanced levels of education, it is difficult to determine whether this figure is reflective of age, education or both. Nevertheless, it is no wonder that persons with disabilities "are placed in disproportionate numbers in the secondary labour market, in readily available, entry level, unskilled, low paying positions" (Navin & Myers, 1983, p. 39). Therefore, upgrading basic skills and retraining in a marketable occupation may reverse both education and employment trends for persons with disabilities.

According to Roessler and Bolton (1985) counsellors must focus more on skill development and provide follow - up to individuals once they have been discharged from vocational services. As suggested by Curnow (1989), vocational rehabilitation counsellors must also assist "clients to cope with their feelings and attitudes about their disability and to bring about an understanding of their strengths and limitations" (p. 275). Through this process, the individual might be able to establish realistic goals that can reverse patterns of impaired career development (Alfred et al., 1987).

Roessler and Bolton (1985) would undoubtedly concur with Curnow (1989) as they advocate that counsellors should promote personal adjustment and positive work

attributes among their clients with disabilities. This conclusion emerged from data collected from persons with disabilities about their perceptions about employers' willingness to hire them. Employers were then asked to rate employees with disabilities on the Minnesota Satisfactoriness Scale which examines performance, conformance, personal adjustment, dependability, and general satisfactoriness. While persons with disabilities held negative expectations regarding employer intentions and hiring attitudes, employers rated persons with disabilities as above average on satisfactoriness. Therefore, the gap between the ratings given by persons with disabilities and their employers must be reduced in order to ease the transition into the labour market and increase the employment rates of persons with disabilities. Perhaps vocational counsellors can facilitate this change by assisting persons with disabilities to look inward and develop strategies to cope with their disability.

With trained and well-adjusted job candidates, vocational counsellors would also be better equipped to promote the hiring of persons with disabilities to interested organizations. Individuals would benefit as well. Not only might they be eligible for a broader spectrum of opportunities, confidence in their skills would come through in spite of the presence of a disability. From an employer's perspective, the opportunity to hire a qualified worker may override the challenges that are presented by the disability. With confidence that the candidate is a skilled worker who is likely to maintain a high level of productivity (Lester & Caudill, 1987), the employer may absorb the costs of architectural modifications knowing that the balance is tipped in the organization's favour. Thus, a focus on ability rather than disability might occur.

With the development of skill on the part of the worker with a disability, the assistance of a vocational counsellor, and the interest of a potential employer, movement toward accessing competitive employment may be achieved. In isolation this recommendation may seem naive. However, when vocational rehabilitation is combined with the Employment Equity Act (1986), such results become more realistic. With marketable skills, persons with disabilities are more qualified for competitive employment and the Employment Equity Act (1986) may provide an opportunity to establish a career.

The marriage of vocational rehabilitation to public policy, for the purpose of developing a representative workforce, is problematic in that it regards the "world of work as a natural order and tries to adjust the disabled person to that world" (Roth & Sugerman, 1984, p. 366). Programs such as these are often designed without understanding the experience of persons with disabilities. Thus, imposing policy in this way may further engender feelings of "powerlessness, anger, and discrimination" (Roth & Sugerman, 1984, p. 368). Stereotypical attitudes may be reinforced rather than dispersed as company executives and counsellors for persons with disabilities interpret their role as a nurturing one. In order to remove this bias, awareness initiatives and public education should parallel vocational rehabilitation, individual growth and development, and employment equity. Barriers to employment might then be reduced.

Awareness initiatives.

With access to professional services that provide vocational assistance and support with the adjustment process, persons with disabilities can upgrade their skills and compete more fairly in the labour force. Employment equity legislation provides the designated group with an opportunity for employment by minimizing discrimination and disadvantage. However, in spite of the positive intentions supporting these measures, "disabled people trying to crack the job market still encounter intolerance, ignorance and rejection" (Galt, 1993, p. 1). Images that define persons with disabilities as debilitated, inferior and incapable continue to prevent full integration of this group in the primary labour market. Public education that parallels the provision of vocational rehabilitation and employment equity legislation might initiate attitude change.

As a precursor to a brief review of awareness initiatives that currently operate in Canadian society, it is important to note that dissemination of information, in the private and public sectors, is only effective if it is of value to the intended audience (McCarthy, 1982). For example, when marketing the benefits of the Employment Equity Act (1986) to a new audience of employers, the "bottom line" financial benefits, rather than solely the benefits to the disabled population, should be stressed. If prospective employers

realize that persons with disabilities maintain high levels of productivity, have better attendance records than their able-bodied counterparts, and are loyal employees (Lester & Caudill, 1987), they are more likely to consider the economic advantages of employing this designated group.

It also seems necessary to establish a network through which information is disseminated. This might reduce the likelihood that stereotypical attitudes and values will block the flow of information to all levels of the organization. "By facilitating this function, networks heighten the impact and relevance of information and the probability that innovations (which represent the applications of new knowledge) will be adopted" (McCarthy, 1982, p. 124). Thus, attitude-change strategies may encourage equality between the disabled and non-disabled population, as well as provide contact with the designated group. "It appears that it is not contact or information alone but contact between able-bodied and disabled people when both are of equal status, and the combination of information about disability and contact with disabled people that are the most powerful change strategies" (Daniels, 1981, p. 160). Integration of children with disabilities into the education system is an example of how equality can be attempted while raising awareness and acceptance of those who challenge existing norms.

At the level of the organization, awareness training can be implemented to soften the attitudinal barriers that prevent access to employment. The Canadian Rehabilitation Council for the Disabled (CRCD) has formulated a sensitivity awareness program that attempts to address this issue. The CRCD orients employers to the appropriate treatment of persons with disabilities so that they are seen as equals in the employment process (Nobel, 1989). For example, awareness of the negative effects of patronization or the use of demeaning language may alter the negative attitudes that currently permeate the workplace.

In addition to structured programs facilitated by organizations such as the CRCD, advocacy groups and human resource departments run campaigns that promote employment based on skill rather than unemployment based on disability. When the use of such measures increases the opportunity for employment for persons with disabilities

by altering long standing stereotypes, as much direct intervention will no longer be required. At present, however, Canada seems to require public policy and awareness initiatives. I anticipate that study participants might agree.

Summary

The preceding literature review has covered factors that could influence access to employment for persons with spinal cord injuries. The literature has shown that physical impairment is determined by both the level and completeness of the spinal cord injury. With loss of function in the lower extremities for a paraplegic injury and impairments in the lower and upper extremities for a quadriplegic injury, specific tasks or the entire employment position may require modification to accommodate physical disability. The onset of spinal cord injury also appears to require an adjustment to living one's life with a physical disability. In review, the research showed that coping with disability is an ongoing, variable process that reflects the complexity of the individual and his/her environment. The onset of physical disability has also been shown to influence the career development of the injured person.

In order to link the effects of spinal cord injury at a personal level to external influences that deter access to the workforce, I provided a brief historical review of the position traditionally held by persons with disabilities in the world of work. This contextualises the increasing participation of persons with disabilities in the workforce and their previous exclusion from it.

External factors that typically discourage full labour participation for persons with disabilities were also reviewed. Attitudinal, physical and procedural barriers seem to be problematic for full integration in spite of the fact that many of these barriers are grounded in myth.

Finally, the literature review included an examination of the Employment Equity Act, the provision of vocational rehabilitation for persons with disabilities, and the introduction of awareness programs. Although these measures have been instituted to reverse the exclusion of persons with disabilities from employment, unemployment in this

group remains high.

The literature review considered the physical, psychological, and vocational changes that may occur when a person sustains a spinal cord injury. The traditional role held by persons with disabilities in the employment arena and the existing physical, procedural, and attitudinal barriers that prevent easy access to the labour market were also discussed. There are however certain gaps in the literature. First, the literature is primarily American and as such may not be entirely generalizable to the employment situation of Canadians or others with disabilities. This study attempts to address part of this void. Secondly, the present study makes a contribution to the existing body of literature because it focuses on correlates which have received little attention in the literature. For example, the employment situation was examined according to an individual's mode of mobility, whether or not he/she resided in a rural or urban community, and whether or not he/she had used vocational services. Another contribution that the present study makes to the literature is examining the roles of project-funded positions and flexible work schedules in securing full-time employment.

The present study examined the employment situation among Albertans with spinal cord injuries. From the qualitative study conducted by Abbott (1993), a questionnaire focusing on demographic information and workplace factors that influence employment was developed. By understanding the potential access and opportunities that enhance access to employment, perhaps successful re-entry will be encouraged.

CHAPTER THREE
METHOD

The Spinal Cord Injury - Work Survey was developed to examine the employment situation among Albertans who have spinal cord injuries. The questionnaire also collected information on the factors that influence the return to work process following the onset of injury. In this chapter of the thesis, questionnaire development will be discussed. Other methodological concerns such as subject selection, data collection procedures, data coding and analyses, and ethical considerations will also be reviewed.

Research Design

Survey research was used in this study. The questionnaire, the Spinal Cord Injury -Work Survey, included items about the participants' employment situation and workplace factors that facilitate or hinder involvement in meaningful employment.

The Abbott (1993) study is the foundation for the current research. In the Abbott (1993) study, the employment experiences of six persons with quadriplegia were examined through indepth interviews. Results indicated that these individuals appeared to pass through a four phase work re-entry process. This process was dynamic and was affected by attributes of the individuals and their support systems, and a variety of workplace factors.

The present study broadened the scope of potential participants. The Spinal Cord Injury - Work Survey was distributed to a large group of participants, with a range of physical limitations as the result of a spinal cord injury. This increased the likelihood of being able to generalize the findings to Albertans with spinal cord injuries. I also examined issues not clearly identified in the Abbott (1993) study such as a range of demographic characteristics (marital status, place of residence, pre and post-injury income levels), and the assessment, counselling, and placement components of vocational rehabilitation. The respondents were asked questions on demographics, the return to work process, specifics of employment, factors of the work place, the physical and social

components of the self, and the attitudes held by persons with spinal cord injuries. Each of these areas will be discussed in this chapter.

Questionnaire Development

A questionnaire that measured the factors that might influence access to employment following spinal cord injury was developed by the researcher. As stated above, the purpose of the questionnaire was to obtain information on the return to work process and the current employment status among Albertans with spinal cord injuries.

Preparation of questionnaire items began with a review of Karp's (1989) thesis entitled, A Discriminant Functions Analysis of Productivity - Related Variables Following Spinal Cord Injury, and Abbott's (1993) study, The Re-entry To Employment Process Following Severe Spinal Cord Injury. Using Trieschmann's model of adjustment following spinal cord injury, Karp (1989) examined environmental variables that affect productivity. Productivity as an outcome was defined by involvement in leisure activities, homemaking, schooling, volunteer work and paid employment. Given the focus of Karp's (1989) thesis, many questions regarding productivity were applicable to the present study. Thus, items relating to demographics, education level and employment status were either revised to apply to the present study or borrowed with the permission of the author. The Abbott (1993) study provided ideas from which other items for the questionnaire were developed. These items were primarily related to the factors that facilitate or hinder access to meaningful employment. For example, questions about the need for a flexible work schedule, and the perceived attitudes of employers and coworkers, were derived from the earlier Abbott qualitative study. In addition to this review of previous research instruments, Krahn and Lowe's (1989) Edmonton Youth Employment Study was examined for design details which were useful in formatting the questionnaire.

A large pool of items which addressed all areas of interest in this study was developed, revised from existing questionnaires, and/or borrowed with the permission of the relevant author (see Appendix A). Questionnaire items were then reviewed by a

team of experts. This group was comprised of persons with spinal cord injuries who either work in the field of rehabilitation (for example, the Canadian Paraplegic Association) or the private sector, and specialists in the area of survey research. The researcher met individually with the reviewers to discuss issues related to the questionnaire items. The purpose of this focused discussion was to clarify the problems that potential participants experience when responding to the questionnaire. Question phrasing and vocabulary choice were also reviewed in the focussed discussion. In essence, this exercise enhanced the validity of the items (Fowler, 1984, p. 100).

After the focussed discussion, survey items were further refined. In order to maximize validity and reliability, special attention was directed at the composition of each survey item. Attempts were made to ensure that question wording fully prepared the respondent to answer, and that the questions meant the same thing to each participant. A small pretest of the items was conducted for the purpose of identifying problematic areas and enhancing the reliability of the questionnaire. Fowler (1984) supports this practice by noting that it is valuable to pretest self-administered questionnaires with potential respondents. Four individuals with spinal cord injuries completed a draft version of the Spinal Cord Injury - Work Survey and provided comments on the format of the questionnaire, whether or not the instructions were clear, if the questionnaire adequately accommodated to the perspective of persons with a range of physical limitations, the range of questions asked, whether additional items should be included, and the time required to complete the items. Feedback received from these individuals was incorporated into revisions of the questionnaire. Final revisions included the ordering of items and an analysis of reading level.

The Spinal Cord Injury - Work Survey was comprised of questions that measure demographics, work experience, factors of the work place, and components of the self in the return-to-work process. Participants were asked to provide basic demographic information such as age, sex, employment status, and income. Based on the Abbott (1993) study, participants were also asked to provide information on 'factors of the work place'. These factors included the physical, procedural, and attitudinal barriers that may

influence the return to competitive employment. Information obtained about work place factors included temporary versus permanent employment, the need for flexible work schedules, the presence of other persons with disabilities in the place of employment, the availability of technical aids and modifications in the work site, and each respondent's focus on ability rather than disability (Abbott, 1993).

The Abbott (1993) study identified 'self in context' as being important in the return to work process following the onset of spinal cord injury. Three components comprised this construct; the physical self, the social self, and the psychological self (Abbott, 1993). The physical self consisted of the challenges that arise due to the physical limitations imposed by the disability. These limitations included skills in activities of daily living, personal care requirements, and mobility management. Personal, peer and professional supports available to the individual also seemed to influence the return to work process (Abbott, 1993). This support network defined the social self. And finally, the psychological self, or coping with spinal cord injury on a psychological level, also seemed to contribute to the experience of re-entering the workforce after the onset of injury (Abbott, 1993). In the current study, questionnaire items were developed to focus on the physical and social self. Given that the study focused on the employment situation among Albertans with spinal cord injuries, gathering information on the psychological self was not intentionally pursued. However, open-ended questions were included in the questionnaire and it was expected that these might provide some information on the psychological self.

The final version of the Spinal Cord Injury - Work Survey (see Appendix B) included forced-choice and open-ended items. Forced-choice questions were presented in varying formats. Some questions were presented in the 'best fit' format which included a statement followed by several answer stems which provided the opportunity for the participant to choose a response that best described his/her situation. An 'other' category was included so that the participant could specify his/her own response if the given alternatives were not personally relevant. Questions about employment situations and attitudes of participants were also measured with the forced-choice format. Such items

measured the intensity of the position taken by the participants by allowing a range of responses to a given question. For example, respondents were asked to indicate their level of agreement with a particular statement. Finally, open-ended questions allowed the respondents to provide information that was personally relevant to their employment experiences.

Because the research population included persons with spinal cord injuries who have limited or no hand function, the majority of questions required that the participant circle a response. Adequate space was left for the respondents to answer the open-ended questions. For those who required assistance in marking their responses, approval for doing so was indicated in the directions preceding the questionnaire (see cover sheet of the Spinal Cord Injury - Work Survey, Appendix B).

All participants provided pre-injury employment information. Those who had been employed at any time in the last six months provided additional employment information. Skip patterns were used to pass over questionnaire items that were not applicable to some of the participants. This in turn reduced the time required to complete the questionnaire and served to minimize participant disinterest (often a result of lengthy surveys) and tiring (especially for those who struggle physically while responding to the items). The pre-test indicated that if all items were answered, the questionnaire took between 45 and 60 minutes to complete.

The reading level of the Spinal Cord Injury - Work Survey was checked using Grammatiik Mac - Version 2.0 (1990). Readability statistics based on the Flesch-Kincaid Grade Level indicated that the questionnaire was at a reading level of grade nine. The Flesch Reading Ease score, which indicates how difficult the writing is to read, was 58. This score means that having some high school education would assist the reader in reading the document. The cover sheet of the Spinal Cord Injury - Work Survey, which outlined the purpose of the questionnaire and discussed informed consent, was at a Flesch - Kincaid Grade Level of ten. The Flesch Reading Ease score was 55 which also means that some high school education would assist the participant in reading the cover sheet. Finally, the letter to participants that accompanied the survey, also received a Grade ten

Flesch - Kincaid score. Similarly, the reading ease score of 60 indicated that reading is manageable with 10 years of schooling. Based on new injury reports kept by the Canadian Paraplegic Association over a ten year period, 72% of their members had completed some course work at the high school level with the remainder having trades/technical training and/or a university education. Given that 93% of the participants indicated that they had completed some high school level education at the time of responding to the survey, the reading level was found to be appropriate.

Subject Selection

Registered clients of the Canadian Paraplegic Association (CPA) who live in Alberta and have spinal cord injuries were asked to participate in this study. The researcher obtained consent from the CPA to access the membership list in order to locate subjects (Appendix C). When permission was granted, the following sample selection procedures were followed.

The sample frame included registered CPA clients in Alberta. Persons who had sustained spinal cord injuries but who were not referred to a rehabilitation hospital for treatment may not have been registered as CPA members and would, therefore, fall outside the sample frame. Persons with physical deficits as a result of their spinal cord injuries typically do complete a formal program at a rehabilitation hospital and these are the individuals of interest in this study. The most recent membership list includes 1725 members. The CPA, however, indicated that a known mailing address was not available for 350 of these individuals. Therefore, the sampling frame consisted of 1375 persons with disabilities. Approximately 165 members of CPA with disabilities known to be other than spinal cord injuries were excluded from the research. Of the remaining population of 1210 CPA members, the questionnaire was distributed to 400 individuals. Potential participants were selected from the sample frame using the principles of random sampling. Using a random number table (Pagano, 1990), 400 members of the Canadian Paraplegic Association were chosen for the sample. While this method was straight forward in that an individual was chosen for the sample if his/her identification number

corresponded with the random numbers table, the data base which listed members of the Canadian Paraplegic Association, failed to distinguish members by type of disability. Thus, some individuals who were initially chosen to participate in the study did not have a spinal cord injury. In order to deal with this difficulty, once sample members were chosen counsellors of the Canadian Paraplegic Association referred to an individual's case file to verify disability type. When an individual was not classified as having a spinal cord injury, he/she was removed from the sample and replaced by another randomly chosen individual.

In most cases, disability-related information was available in a members' file. However, some members of the Canadian Paraplegic Association have never been assigned a counsellor and thus do not have a client file with the Association. Hence, disability-related information was not available for twelve individuals chosen in the sample. Rather than discount those individuals whose disability had not been clearly delineated, they were sent the Spinal Cord Injury - Work Survey.

A review of the membership list indicated that approximately 80% of CPA members were male and 57% have completed up to a high school education. Fifty one percent of the members of the Canadian Paraplegic Association have quadriplegic type injuries and 49% have paraplegic type injuries. (New Injury Reports, 1983 - 1993). A detailed description of the sample will be discussed in the results chapter of this dissertation.

Data Collection Procedures

Those individuals who were included in the random sample were surveyed by mail using the Spinal Cord Injury - Work Survey. Funds and/or materials required to print and mail out the Spinal Cord Injury - Work Survey were donated by Key To Savings Advertising, Innova and the Canadian Paraplegic Association. A watch was donated by Gelmici and Son Jewellers as the prize incentive for completing the questionnaire.

Prior to questionnaire mail out, CPA clients were notified of the purpose and

importance of the upcoming study by way of a short article in Spinal Columns (see Appendix D), the provincial newsletter of the Canadian Paraplegic Association. Each CPA client who was chosen in the sample was then mailed a package containing the following items; (1) a covering letter explaining the importance and purpose of the study and encouraging participation (Appendix E), (2) the Spinal Cord Injury Work-Survey and cover sheet, (3) a postage-paid return-addressed envelope and, (4) a prize-draw entry form as an incentive to return the questionnaire.

Questionnaire packages were mailed in late April 1995 and subjects were requested to complete the questionnaire immediately. For subjects who were unable to complete the questionnaire on their own because of reduced hand-function, assistance in marking their responses was encouraged. Subjects were, however, asked to personally respond to the questionnaire items. In order to track returned questionnaires while maintaining confidentiality, each subject was assigned an identification number (CPA membership number) and was sent the corresponding questionnaire. As questionnaires were received by the researcher, the identification number (located at the right hand corner of the questionnaire) was removed and discarded. The subject's name was also deleted from a computer list containing all possible participants. This ensured respondent confidentiality.

Approximately three weeks after the initial mail-out, all potential participants who had not returned completed questionnaires were contacted by their assigned counsellor of the Canadian Paraplegic Association - Alberta. Counsellors were given the following script as a guide for encouraging CPA members to return their questionnaires.

> Hello, this is (counsellor) speaking. I am helping Jodi Abbott with her research on the factors that influence the return to employment following spinal cord injury. You would have received the Spinal Cord Injury - Work Survey and an entry form for a prize draw in the mail in early May. Do you remember getting it? (If yes, continue. If no, provide general information on the study that was printed in Spinal Columns and offer to send out another copy of the questionnaire). Well, I'm calling to ask for your help in putting together the information for her project. I would appreciate if you could either complete the questionnaire on your own and mail it tomorrow or, if you would like, we could work through

> the questionnaire right now. (Whether or not the individual indicates that him\her would like to participate by completing the questionnaire, thank him\her for their time).

The counsellors were also given information on issues of confidentiality in accordance with the ethical guidelines of the Department of Educational Psychology at the University of Alberta.

Within a week of the initial mail-out of 400 questionnaires, 60 were returned to the sender marked as address unknown. To maintain the original sample of 400, another 60 potential participants were selected randomly from the sample frame. The questionnaire packages of 42 of the 60 replaced sample members were also returned to the researcher marked address unknown. Six additional packages were returned to the sender marked "deceased" and five of the participants had a disability other than a spinal cord injury.

Prior to telephone follow-up, 68 completed questionnaires were returned to the researcher. With telephone follow-up over a period of one month, an additional 14 questionnaires were returned. The total number of returned questionnaires was 82. The response rate of the Spinal Cord Injury - Work Survey was 21%. This figure was calculated by removing the deceased and individuals without spinal cord injuries from the original sample of 400 (leaving a sample of 389 persons with spinal cord injuries). It is interesting to note that one participant re-typed the questions and his responses to them using a mouthstick. The participant indicated that he did so because he was unable to obtain assistance in marking the items. Thus, in spite of the physical limitations of the respondents, questionnaires were still completed and returned to the researcher. It will be demonstrated in the Sample Profile section of the results chapter that the respondents reasonably represent the population from which they were selected.

Data Recoding and Analysis

Once the data were collected from the questionnaire, forced-choice responses were transcribed for computer input and analysis. Using the transcribed information, a key-puncher entered all data into the computer. Once all entries were made, the key-

puncher, programmer and researcher examined the data files for data-entry inconsistencies and made the necessary corrections by referring back to the original questionnaires. This entire coding and cleaning process minimized errors in the assembly of the data.

The data obtained in the questionnaires allowed for an exploratory examination of the distribution of demographic information (e.g., age, level of education, disability, etc.) as they relate to employment status, workplace factors, and components of the self. In addition to descriptive statistics, the Chi-square test and multiple regression analysis provided a measurement of the statistical significance of relationships observed in the data. Thus, in the following chapter, tables presenting descriptions of some characteristics of the total sample do not contain significance tests. However, in tables that compare populations sub-groups (e.g., more and less-educated respondents) on some outcome measure (e.g., employment income), appropriate significance tests are introduced. As is customary, more emphasis is placed on those differences found to be statistically significant. However, given the small sample (which makes statistical significance harder to reach), some non-significant findings are also discussed, if they reflect a general pattern that is noteworthy.

For open-ended questions, responses were analyzed using the following method. Initially meaning units were extracted from the written responses. These units were then paraphrased, synthesized, and given a tag that accurately reflected the initial meaning of the response (Strauss & Corbin, 1990). The final phase of the analysis involved the construction of themes based on the amalgamation of the data from all of the participants.

Ethical Considerations

The ethical guidelines of the Department of Educational Psychology at the University of Alberta were followed in this study. In doing so, the researcher ensured informed consent of the participants, provided an opportunity for opting out of the study, and maintained the confidentiality and anonymity of the participants. The parameters of informed consent were outlined on the cover page of the Spinal Cord Injury - Work

Survey. By completing the questionnaire and returning it to the researcher, members of the Canadian Paraplegic Association were indicating consent to participate in the study. Completed questionnaires are retained in a locked file and the computer membership list was returned to the Canadian Paraplegic Association where this print-out was shredded.

Summary

A questionnaire was developed to examine the factors that influence access to employment following the onset of spinal cord injury. The validity and reliability of the Spinal Cord Injury - Work Survey was enhanced by using previous research as a guide, involving experts in a focused discussion, and pre-testing questionnaire items. With permission of the CPA, 400 of their members were mailed the questionnaire. Telephone follow-up was conducted by the CPA to encourage participation. While the response rate is low, given the length of the questionnaire and the physical challenges of the respondents disabilities, it is considered to be satisfactory. Furthermore, as will be noted in the next chapter, the sample is relatively representative of the population. Upon receipt of the completed questionnaires, data were coded and analyzed.

CHAPTER FOUR
RESULTS

Sample Profile

Demographic Characteristics

Age, gender, minority affiliation, marital status and place of residence.

The respondents to the Spinal Cord Injury - Work Survey ranged in age from 12 - 76 years (the age distribution was fairly normal). Almost all (98%) were of typical working age (15-64). There was one respondent under the age of 15 and one respondent over the age of 65. The mean age was 39 years. Seventy-eight percent of the respondents were male. This gender proportion is consistent with the population of persons with spinal cord injuries in the Province of Alberta as reported by the Canadian Paraplegic Association. When a ten-year period of new injury reports was examined by the researcher, 80% of members with spinal cord injuries were male and 20% were female. This is also consistent with the information recorded on the American National Spinal Cord Injury Statistical Center's data base (Stover & Fine, 1986). Over the past 13 years, the proportion of spinal - cord injured who are males was constant at 82%.

Only 4% of the respondents reported being Aboriginal. This proportion is somewhat low, given that the Canadian Paraplegic Association (Alberta) estimated that approximately 10% of Albertans with spinal cord injuries are Aboriginal. None of the respondents considered themselves to be a member of a visible minority.

At the time of the onset of the spinal cord injury, 61% of the respondents were single, 34% were married, 4% were living in a common law relationship, and 1% were divorced. These figures seem to be representative of the spinal cord injured population as the National Spinal Cord Injury Statistical Center reported that at the time of injury, approximately 60% of persons were single and 30% were married (Stover & Fine, 1986). The marital status of the participants in the current study is also relatively consistent with the population of Alberta members of the Canadian Paraplegic Association. The Association reported that, at the time of injury, 66% of the individuals were single, 22% were married, 4% were involved in common-law relationships, 6%

were divorced, and 2% had been widowed (New Injury Reports, 1983-1993). Since injury, the marital status of the respondents changed. Fewer respondents are single (44%) and more are married (47%). Four percent are divorced and 1% are widowed. Thus, some of the respondents married after the injury.

There has also been a change in residence for the respondents since the onset of the spinal cord injury. Table 1 illustrates the size of the community that the respondents lived in at the time of the onset of the spinal cord injury and at the time of answering the questionnaire.

Table 1

Place of Residence

Size of Community	At Time of Injury		Current	
	%	N	%	N
Rural Community	61.0	50	35.4	29
Urban Centre	39.0	32	64.6	53
Total:	100.0	82	100.0	82

At the time of injury 61% of the respondents lived in a community with a population of less than 10,000. This compares with 35% at the time of responding to the questionnaire. Similarly, 65% of the respondents currently reside in a city in comparison to 39% who lived there at the time of the injury. This indicates movement from rural to urban Alberta. When respondents were asked to rate the reasons for their move, the largest percentages giving a rating of 'important' were found in the following categories; moved to be closer to family or personal support system, moved to live in an accessible environment, and moved to access continued education.

Disability-Related Information

The number of years since the onset of the spinal cord injury ranged from one to 31 for the respondents. Groups were categorized with a similar number of respondents so that meaningful statistical comparisons could be made with other variables. Thus, the distribution was relatively even with 25.9% being injured 1 to 5 years, 25.9% for 6 to 12 years, 23.5% for 13 to 18 years, and 24.7% for 19 to 38 years. This range therefore included the newly injured as well as veterans. The mean number of years since the onset of spinal cord injury was 12.32.

When the respondents were asked about the type of spinal cord injury (self-defined) they had sustained, 26% reported having an incomplete quadriplegic type injury, and 30%, a complete quadriplegic injury. For persons with paraplegia, 14% reported that the injury was incomplete and 30% indicated a complete injury. When the degree (complete and incomplete) of injury was combined, 56% of the respondents reported having quadriplegic-type injuries and 44% indicated paraplegic-type injuries. The sample was relatively consistent with the population as the Canadian Paraplegic Association reported that 51% of their members have quadriplegic-type injuries and 49% have paraplegic-type injuries (New Injury Reports 1983 - 1993). Furthermore, this proportion is consistent with information available on the United States National Spinal Cord Injury Statistical Center's database. From 1973 to 1984 the mean percentage of quadriplegic-type injuries was 54.2% (Stover et al., 1986). When the level of injury was further examined it was evident that the majority of the respondents with quadriplegia were injured at the C5-C8 levels (44.4%), whereas the largest percentage of participants with paraplegia had sustained injuries at the T7-T12 levels (22.2%).

In addition to self reports regarding injury classification, data on the mode of mobility, and aids and modifications required in the workplace, provide information on the functional abilities of the respondents. Eighty-six percent of all the respondents indicated that at least 75% of the time they relied on a wheelchair for mobility. Sixty-seven percent of this group utilized a manual wheelchair whereas 19.5% used a power wheelchair. Non-wheelchair users are those who are less severely injured and can walk (unassisted or with aids) the majority of the time. Table 2 illustrates whether or not aids

and modifications were required in the workplace by the respondents.

Table 2

Need for Aids and Modifications in the Workplace

Type of Aid	% Needed	Total N (#)	Type of Modification	% Needed	Total N (#)
Writing Splint	20.0	80	Wide Doorways	61.7	81
Mouth Stick	8.8	80	Handrails	16.0	81
Computer	27.5	80	Wheelchair Access	76.5	81
Assistant	28.2	78	Lever Door Handles	39.5	81
Other	18.5	81	Accessible Washroom	74.1	81
			Other	8.6	81

Each of these questions were asked of all participants. Percentages are based on those who responded to each question (maximum N = 82).

Almost 50% of the respondents required some form of aids in the workplace, whereas up to approximately 80% of the respondents required some type of building modifications. Those respondents who identified the need for 'other' aids identified a reacher, typing splint, and an accessible washroom as important. Other modifications noted were an elevator, an accessible desk, and an automatic door. Need for wide doorways (61.7%), an accessible washroom (74.1%), and wheelchair access into the building in which they work (or might work) (76.5%) is consistent with the sample predominantly indicating that they rely on a wheelchair for mobility.

Education

The survey respondents provided information on the level of education they had attained at the time of the onset of the injury as well as whether or not they had upgraded

their education following the injury. Table 3 illustrates prior and current education levels.

Table 3

Education Level - Pre and Post Onset of Spinal Cord Injury

Education Level	Prior to Onset of SCI		Current	
	%	N	%	N
9th Grade or Less	9.8	8	7.3	6
Some High School	26.8	22	11.0	9
High School Graduate	20.7	17	14.6	12
Some Community College	4.9	4	12.2	10
Community College Graduate	13.4	11	20.7	17
Some University	12.2	10	12.2	10
Bachelor's Degree	3.7	3	8.5	7
Some Post Graduate Training	0.0	0	2.4	2
Post Graduate Degree	8.5	7	11.0	9
Total:	100.0	82	100.0	82

Prior to the onset of the injury a total of 57.3% of the respondents indicated that they had completed high school or less. At the time of the survey, only 32.9% were in this category. It is evident that participants increased their level of education after the onset of the spinal cord injury. A total of 20 participants increased or completed their high school education and a total of 20 increased their post secondary education. When respondents were asked to rate the importance of a range of reasons for increasing their education level, the following received a rating of "important" for the largest percentage of the group: increased education level to prepare for a specific job/career (65.7%), to fill time/alleviate boredom (43.2%), to advance further in their education (84.2%), and

to advance in their careers (44.4%).

Description of the Employment Situation Among Albertans With Spinal Cord Injuries

Productive Activity

Respondents to the Spinal Cord Injury - Work Survey provided information about their involvement in productive activity including involvement in paid employment, volunteer work, child care, house work, attending classes and doing school work, and recreation and leisure activities.

Prior to the injury, 61.5% of the respondents were involved in paid work for a minimum of 40 hours per week. An additional 5.1% of the respondents worked between 30 and 39 hours per week. The mean number of hours worked per week in paid employment was 32.

Approximately 42% of the respondents were employed (n=34) when they completed the questionnaire, and 4.9% were unemployed (not working but looking for work). A total of 50% were out of the labour force, including 32.9% who had never worked since the onset of their injuries. Thirty-four percent of persons who had worked in the six months (n=38) before answering the questionnaire worked less than 30 hours per week. Eight percent of those currently employed indicated that they worked between 30 and 39 hours per week, and 22.7% of them worked more than 40 hours per week. The average number of hours per week worked in paid employment was 17.01. In summary, there were fewer persons employed after injury and those who were employed were working fewer hours.

Table 4 provides information on activities other than employment. When post - injury activity was reviewed, 50% were actively pursuing volunteer work, 17% participated in child care, 55% were involved in completing household chores, and 16% were attending classes and doing school work. A larger percentage (81%) of the group participated in recreation and leisure activities.

Table 4

Hours Per Week Spent in Other Productive Activities

Productivity Activity	Hours	Pre - Injury			Post - Injury		
		%	N (#)	$\bar{x}$ Hrs	%	N (#)	$\bar{x}$ Hrs
Volunteer Work				1.2			3.4
	0	79.2	61		50.0	38	
	1-10	18.2	14		43.4	33	
	11-20	2.6	2		5.3	4	
	21+	0.0	0		1.3	1	
Total:		100.0	77		100.0	76	
Child Care				4.1			4.5
	0	81.6	62		82.1	61	
	1-10	10.6	8		6.8	5	
	11-20	3.9	3		5.4	4	
	21+	3.9	3		5.4	4	
Total		100.0	76		100.0	74	
Housework				4.8			6.4
	0	47.4	36		44.6	33	
	1-10	39.5	30		39.2	29	
	11-20	7.8	6		8.1	6	
	21+	5.3	4		8.1	6	
Total		100.0	76		100.0	74	
School				10.1			2.4
	0	71.4	55		84.0	63	
	1-10	2.6	2		8.0	6	
	11-20	2.6	2		5.3	4	
	21+	23.4	18		2.7	2	
Total		100.0	77		100.0	75	
Recreation/Leisure				18.7			17.6
	0	11.8	9		18.7	14	
	1-10	21.1	16		24.0	18	
	11-20	40.8	31		29.3	22	
	21+	26.3	20		28.0	21	
Total		100.0	76		100.0	75	

Each of these questions were asked of all participants. Percentages are based on those who responded to each question (maximum N = 82).

When the average number of hours spent in productive activity prior to the onset of injury was compared to the level of activity after the injury, change was evident. Participants, on average, showed a noticeable increased involvement in volunteer work, a small increase in housework, and a marginal increase in child care. This is consistent with a decrease in employment activity. Table 4 also shows that respondents participated less in leisure activities. The largest change was observed in attending classes and doing school work after the onset of spinal cord injury. As noted in Table 4, prior to injury participants spent an average of 10 hours per week involved in school-related activities. At the time of answering the questionnaire, this average decreased to 2.4 hours per week. This suggests that at the time of completing the questionnaire fewer participants were actively engaged in upgrading their education and more were engaged in volunteer work.

Employment-Related Characteristics of Employed Persons With Spinal Cord Injuries

Given that the researcher was interested in examining the characteristics of employed persons with spinal cord injuries, the remainder of the analysis focuses primarily on this group of individuals. The number of persons included in the analysis may vary between 34 and 38 because four of the respondents had worked in the six months preceding the questionnaire but at the time of the study were not working. At the time of completing the questionnaire these four participants were unemployed (not working but looking for work). Participants who were unemployed, out of the labour force, and had never worked since the onset of spinal cord injury were combined into a non-working group. Details about this group will be used for comparison purposes when it is relevant to do so.

In order to provide an overview of the current situation of employed persons with spinal cord injuries in Alberta, the researcher selected several correlates which help to describe this group. These correlates included: gender, age, current residence, education level, disability type, mode of mobility, years since onset of the spinal cord injury, and whether or not respondents had used vocational services. The following table provides a description of the employed participants in this study.

Table 5

Percentage Employed By Selected Correlates

Correlates	%	Total N (#)
Total	41.5	82
Gender		
Female	22.2	18
Male	46.9	64
Age		
15 - 44	45.5	55
45 - 64	37.5	24
Current Residence		
Rural (population < 10,000)	34.5	29
Urban (population > 10,000)	45.3	53
Education Level		
Up to High School Graduation	18.5*	27
Beyond High School Graduation	52.7*	55
Disability Type		
Quadriplegia	42.2	45
Paraplegia	41.7	36
Mode of Mobility		
Wheelchair User	36.6	71
Non Wheelchair User	72.7	11
Years Since Onset of SCI		
1 - 5 Years	33.3	21
6 - 12 Years	42.9	21
13 - 18 Years	47.4	19
19 - 38 Years	45.0	20
Use of Vocational Services		
Yes	47.2	36
No	37.0	46

Totals may not equal 100% due to non-response.

* Differences are statistically significant ($p < .05$, chi-square test).

Approximately the same proportion of persons with quadriplegic type injuries as paraplegic type injuries were employed. The results appear to indicate that

non-wheelchair users were more likely than wheelchair users to be employed. It is important to note however, that the number of non-wheelchair users (n = 11) in the sample was considerably smaller than wheelchair users (n = 71).

Among individuals who had completed up to high school graduation, only 18.5% were employed. This compares to an employment figure of 52.7% for those who had an education beyond high school. The difference was statistically significant ($p < .05$, Chi-square test). This seems to suggest that if an individual had up to a high school level of education, it was less likely that he/she will be employed. Interestingly, with an advanced level of education, the individual had a relatively equal chance of being employed or not. This raises the question of whether other factors such as physical limitations imposed by disability, an accessible work environment, or attitudinal barriers influenced employment opportunities for persons with spinal cord injuries. This question will be further examined in the discussion chapter.

Another correlate to consider is the use of vocational services. As shown in Table 5, among those who had used vocational services approximately 47% were employed. Among those who had not used vocational services 37% were employed. While the relationship between securing employment and using vocational services was in the predicted direction, the association between the variables was not statistically significant.

Job classifications.

Identifying the type of pre and post-injury employment that the participants had been involved in will provide more information about their employment experiences. Table 6 classifies the participants into six job categories. The categories were developed using the Canadian Classification Dictionary of Occupations as a rough guide. Labourers included participants who identified jobs such as farm hand, car washer, truck driver, faller/logger, and concrete batcher. Those participants classified as tradesmen reported jobs such as master carpenter, electrician, and welder. In this category it was assumed that the occupation typically required a "ticket" to be recognized as a trade. A technical position was defined by the requirement of specialized technical training. Respondents who were classified into this field identified occupations such as draftsman,

programmer/analyst, and electronics technician. Secretaries, bank tellers, and clerks were some of the jobs which comprised the clerical category. Food Services included a range of jobs such as working as a waitress, cooking in an oil rig camp, and being a sous chef in a renowned restaurant. Finally, the professional classification was broad and included lawyers, teachers, social services workers and counsellors, researchers and government officials.

Table 6

Type of Employment

Job Classification	Pre - Injury		Post - Injury	
	%	N	%	N
Laborer	43.1	25	5.3	2
Trades	20.7	12	0.0	0
Technical	6.9	4	23.7	9
Clerical	6.9	4	23.7	9
Food Services	10.3	6	5.3	2
Professional	12.1	7	42.0	16
Total:	100.0	58	100.0	38

The number of persons in labour-intensive occupations declined from 43% prior to injury to 5% after traumatic injury. The pre-injury pattern suggests that individuals who were involved in the trades and labour occupations are those who were more likely to be spinal cord injured. The post-injury pattern suggests further that those who were involved in occupations that require physical agility could no longer perform such tasks due to the limitations imposed by the spinal cord injury. Thus, a decline in involvement in labour-intensive occupations is not surprising given that 86.6% of the sample uses a wheelchair for mobility.

Another noticeable difference indicated in table 6 is that prior to the onset of injury, approximately 12% of the respondents fell within the professional classification in comparison to 42% after the injury. With this increase in the proportion of participants working in professional-type jobs after injury additional skill training would have been required. This is consistent with the data on education which indicated that approximately 50% of the respondents increased their education and 65.7% of the respondents did so in order to prepare for a specific job/career.

Table 7

Movement In Employment Type - Pre and Post Injury

Prior to Injury →	Total	Laborer	Trades	Technical	Clerical	Food Services	Professional	No Job
Post Injury ↓								
Total:	82	25	12	4	4	6	7	24
Laborer	2	1	-	-	-	-	-	1
Trades	0	-	-	-	-	-	-	-
Technical	9	2	2	2	-	1	1	1
Clerical	9	4	2	1	-	1	-	1
Food Services	2	1	-	-	-	1	-	-
Professional	16	2	1	-	-	-	3	10
No Job	44	15	7	1	-	3	3	11

When job classification is examined in more detail in Table 7, job placement patterns are evident. First, of the 25 individuals who worked as labourers prior to injury 60% were not working at the time of completing the questionnaire. Among those who have re-entered the workforce (n = 10), 40% were involved in clerical work, and 20% in professional-type jobs.

Another interesting pattern evident in Table 7 is that prior to injury 29% of the respondents were not working. This compares to 54% who were not working in the six months prior to answering the questionnaire. Furthermore, for those who were not

employed prior to injury (n = 24), 10 are now trained as professionals. Once again this is consistent with individuals advancing their level of education in order to re-enter the labour market in the professional field.

Post-injury employment was further categorized according to disability type and mode of mobility (see Table 8). Interestingly, a greater proportion of persons with quadriplegia (50.0%) than those with paraplegia (28.6%) were involved in professional occupations. This is similar to the proportion of wheelchair users (43.3%) in comparison to non-wheelchair users (37.5%) who were involved in the professions. This might be a result of professional occupations offering work that requires less physical agility. Although one would expect a similar pattern with clerical-type work because it is less physically demanding, the pattern changes. A relatively similar proportion of persons with quadriplegia and paraplegia were working in clerical positions. Among wheelchair users however, 30% were working in clerical type jobs in comparison to none of the non-wheelchair users.

Table 8

Post-Injury Type of Employment

Job Classification	Disability Type				Mode of Mobility			
	Quadraplegia		Paraplegia		Wheelchair User		Non Wheelchair User	
	%	N	%	N	%	N	%	N
Laborer	4.2	1	7.1	1	3.3	1	12.5	1
Trades	0.0	0	0.0	0	0.0	0	0.0	0
Technical	20.8	5	28.6	4	23.3	7	25.0	2
Clerical	25.0	6	21.4	3	30.0	9	0.0	0
Food Services	0.0	0	14.3	2	0.0	0	25.0	2
Professional	50.0	12	28.6	4	43.4	13	37.5	3
Total:	100.0	25	100.0	14	100.0	30	100.0	8

Full-time and permanent positions.

The examination of other variables such as the permanency of employment and whether or not individuals were working in full-time positions (30 hours per week or more), provides a further understanding of the employment situation of Albertans with spinal cord injuries. Although none of the correlates tested reached a level of significance when a series of Chi-square tests were conducted, some interesting patterns were apparent. It appears as though a greater proportion of those living in urban centers and those with advanced levels of education were likely to be employed full-time. Among persons with quadriplegia, 73% worked full-time. This percentage was noticeably higher than those who have paraplegic-type injuries (44%). When mode of mobility was considered, persons who did not require a wheelchair for mobility most of the time were more likely to be employed full-time. Significant differences with the range of correlates tested were also not apparent when permanent employment was considered.

When compared to the general population, persons with spinal cord injuries who completed the questionnaire were worse off in terms of working in full-time and permanent positions. According to Statistics Canada, 83% of employed Canadians were working in full-time positions in 1994 (cited in Perspectives On Labour and Income, Winter 1995). As noted in Table 9, just over 50% of the respondents worked in full-time jobs. The remaining participants worked in part-time positions. When permanent versus temporary work was considered, 70% of the respondents were employed in permanent positions, and 30% in temporary positions. Krahn (1995) indicated that when data from the 1994 General Social Survey was examined, 9% of the Canada-wide respondents identified themselves as temporary workers. If permanent work is more desirable because it provides security, the participants in the present study were more severely disadvantaged than Canadians in general as more of them worked in temporary positions.

Table 9

Percentage Employed In The Last Six Months In Full Time and Permanent Positions By Selected Correlates

Correlates	Full Time Work		Permanent Work	
	%	Total N (#)	%	Total N (#)
Total	59.0	23	71.1	27
Gender				
Female	50.0	2	75.0	3
Male	60.0	21	70.6	24
Age				
15 - 44	56.7	17	70.0	21
45 - 64	66.7	6	75.0	6
Current Residence				
Rural (population < 10,000)	38.5	5	69.2	9
Urban (population > 10,000)	69.2	18	72.0	18
Education Level				
Up to High School Graduation	42.9	3	57.1	4
Beyond High School Graduation	62.5	20	74.2	23
Disability Type				
Quadriplegia	72.7	16	68.2	15
Paraplegia	43.8	7	80.0	12
Mode of Mobility				
Wheelchair User	54.8	17	73.3	22
Non Wheelchair User	75.0	6	62.5	5
Years Since Onset of SCI				
1 - 5 Years	37.5	3	62.5	5
6 - 12 Years	72.7	8	63.6	7
13 - 18 Years	60.0	6	90.0	9
19 - 38 Years	60.0	6	66.7	6
Use of Vocational Services				
Yes	61.9	13	65.0	13
No	55.6	10	77.8	14

Regular hours and flex-time.

As noted in Table 10, approximately 60% of the employed respondents worked regular hours and 49% worked flex-time. When disability type was reviewed, a higher proportion of persons with quadriplegic than paraplegic type injuries worked regular hours. They were equally likely to work flex-time.

Significant differences ($p < .05$, Chi-square test) were evident when residence was considered. It was apparent that those who lived in urban centres were more likely than those in rural areas to work regular hours. Likewise, those who resided in rural communities were more likely than those in urban centers to work flex-time.

Table 10

Regular Hours and Flex Time By Selected Correlates

Correlates	Regular Hours		Flex Time	
	%	Total N	%	Total N (#)
Total	60.5	38	48.6	37
Gender				
Female	50.0	4	50.0	4
Male	61.8	34	48.5	33
Age				
15 - 44	58.6	29	46.4	28
45 - 64	66.7	9	55.6	9
Current Residence				
Rural (population < 10,000)	30.8*	13	76.9*	13
Urban (population > 10,000)	76.0*	25	33.3*	24
Education Level				
Up to High School Graduation	71.4	7	14.3*	7
Beyond High School Graduation	58.1	31	56.7*	30
Disability Type				
Quadriplegia	71.4	21	40.0	20
Paraplegia	50.0	16	56.3	16
Mode of Mobility				
Wheelchair User	67.7	31	44.8	29
Non Wheelchair User	28.6	7	62.5	8
Years Since Onset of SCI				
1 - 5 Years	37.5	8	50.0	8
6 - 12 Years	60.0	10	54.5	11
13 - 18 Years	60.0	10	33.3	9
19 - 38 Years	80.0	10	55.6	9
Use of Vocational Services				
Yes	71.4	21	47.6	21
No	47.1	17	50.0	16

Totals may not equal 100% due to non-response.

* Differences are statistically significant ($p < .05$, Chi-square test).

Sixty percent of the participants indicated that it was important to have a flexible

work schedule. When the respondents were asked to rate the importance of a range of reasons for having a flexible work schedule, the following received a rating of "important" for the largest percentage of the group: to deal with unexpected personal care needs (i.e., bowel and bladder accidents) (79%), to allow time to get work done in order to maintain job performance (68%), to manage care needs (when done by oneself) (64%), and to manage care needs (when assistance was needed) (62%). Nearly half of those who responded indicated that flex-time was important to allow for the development of stamina, but fewer (36%) said it was important to work flex-time to ensure family time.

Income.

As displayed in Table 11, the level of gross income increased after the onset of spinal cord injury. Even though this increase is difficult to interpret because of the range of years since injury onset and the value of pay received at the time of injury, when compared to the average family income reported by Albertans in 1993 the respondents income was low. According to Statistics Canada, in 1993 the average family income in Alberta was $56,500 in comparison to the total average income of $30,448.67 reported by the participants (cited in Perspectives on Labour and Income, 1995) .

There was a decline of approximately $4,000.00 from the pre-injury period to the post-injury period when employment income was considered. When compared to the average annual employment earnings of Albertans ($28,756.00), the respondents' average employment income was considerably lower at $15,545.30. As will be shown in Table 14, fewer respondents indicated that their current jobs offer good pay in comparison to their pre-injury jobs. Disability-related income comprised a substantial proportion (35%) of the reported gross income after the onset of injury.

Table 11

Overview of Mean Income Per Year Pre and Post Injury

Pre - Injury Income		Post - Injury Income	
Source	**Mean Income/Yr**	**Source**	**Mean Income/Yr**
Total	$24,525.48	Total	$30,448.67
Employment	$19,777.48	Employment	$15,545.30
		Disability-Related	$10,521.83

Table 12

Total Income Per Year By Selected Correlates

Correlates	$0	$1.00 - 15,000	$15,001- 30,000	$30,001 - 200,000		
	%	%	%	%	Total N	Total %
Total	4.0	38.7	14.7	42.6	75	100.0
Gender					75	
Female	6.3	50.0	25.0	18.7	16	100.0
Male	3.4	35.6	16.9	44.1	59	100.0
Age					74	
15 - 44	1.9	42.3	17.3	38.5	52	100.0
45 - 64	4.6	31.8	22.7	40.9	22	100.0
Current Residence					75	
Rural (population < 10,000)	8.3	45.8	4.2	41.7	24	100.0
Urban (population > 10,000)	2.0	35.3	25.5	37.2	51	100.0
Education Level					75	
Up to High School Graduation	8.7*	52.2*	17.4*	21.7*	23	100.0
Beyond High School Graduation	1.9*	32.7*	19.2*	46.2*	52	100.0
Disability Type					74	
Quadriplegia	4.8	35.7	21.4	38.1	42	100.0
Paraplegia	3.2	40.6	15.6	40.6	32	100.0
Mode of Mobility					75	
Wheelchair User	4.7	40.6	18.8	35.9	64	100.0
Non Wheelchair User	0.0	27.3	18.2	54.5	11	100.0
Years Since Onset of SCI					75	
1 - 5 Years	10.0	55.0	10.0	25.0	20	100.0
6 - 12 Years	0.0	30.0	15.0	55.0	20	100.0
13 - 18 Years	5.3	31.6	15.8	47.3	19	100.0
19 - 38 Years	0.0	37.5	37.5	25.0	16	100.0
Use of Vocational Services					75	
Yes	2.9	41.2	20.6	35.3	34	100.0
No	4.9	36.6	17.0	41.5	41	100.0

* Differences are statistically significant ($p < .05$, T-test independent samples).

Persons with spinal cord injuries who received the highest gross income were those who had education beyond the high school level. This difference was statistically significant ($p < .05$, T-test independent samples).

Although not statistically significant, there were several other noticeable trends regarding total income (refer to Table 12). It appeared as though individuals were more likely to be in the top income group ($30,001-200,000) if they were non - wheelchair users and if they were male. It was also apparent that respondents who had been injured between six and eighteen years ago comprised the top income group. This was not surprising given that those individuals had time to earn merit/pay increases as well as gain seniority in their jobs.

When the previously identified correlates were considered with annual employment income, differences were found to be statistically significant ($p < .05$, T-test independent samples) for education level, mode of mobility and the use of vocational services. Table 14 shows that with advanced education, respondents were likely to achieve a higher level of employment income. Non-wheelchair users were paid more in employment than wheelchair users, although disability type did not differ significantly. Finally, the use of v ional services also had an impact on employment income. Interestingly, only 11.1% of participants who utilized vocational services earned more than $30,000 per year through paid employment. Almost one-quarter (23.9%) of those who did not use vocational services were in the top employment income group (earning up to $200,000 per year).

Table 13

Employment Income Per Year By Selected Correlates

Correlates	$0	$1.00 - 15,000	$15,001- 30,000	$30,001 - 200,000		
	%	%	%	%	Total N	Total % (#)
Total	51.2	12.2	12.2	18.3	82	100.0
(Employed Only)		**(28.6)**	**(28.6)**	**(42.8)**	**(35)**	**(100.0)**
Gender						
Female	77.8	0.0	5.6	11.1	18	94.5
Male	43.8	15.6	14.1	20.3	64	93.8
Age						
15 - 44	43.6	18.2	12.7	20.0	52	94.5
45 - 64	62.5	0.0.	12.5	16.7	22	91.7
Current Residence						
Rural (population < 10,000)	58.6	13.8	6.9	10.3	26	89.6
Urban (population > 10,000)	47.2	11.3	15.1	22.6	51	96.2
Education Level						
Up to High School Graduation	74.1*	11.1*	7.4*	0.0*	25	92.6
Beyond High School Graduation	40.0*	12.7*	14.5*	27.3*	52	94.5
Disability Type						
Quadriplegia	44.4	15.6	11.1	22.2	42	93.3
Paraplegia	61.1	5.6	13.9	13.9	34	94.5
Mode of Mobility						
Wheelchair User	54.9*	11.3*	14.1*	12.7*	66	93.0
Non Wheelchair User	27.3*	18.2*	0.0*	54.5*	11	100.0
Years Since Onset of SCI						
1 - 5 Years	66.7	9.5	4.8	14.3	20	95.3
6 - 12 Years	42.9	14.3	14.3	23.8	20	95.3
13 - 18 Years	47.4	10.5	15.8	26.3	19	100.0
19 - 38 Years	45.0	15.0	15.0	10.0	17	85.0
Use of Vocational Services						
Yes	41.7*	22.2*	19.4*	11.1*	34	94.4
No	58.7*	4.3*	6.5*	23.9*	43	93.4

Totals may not equal 100% due to non-response.
* Differences are statistically significant ($p < .05$, T-test independent samples).

Multiple regression analysis was used to determine the net effects of age, education level, type of disability, mode of mobility and use of vocational services on employment income among the employed. Forty-three percent of the variance in employment income can be explained by these independent variables.

As displayed in Table 14, age and the use of vocational services contributed significantly ($p < .05$) in explaining the variance in employment income. The older the person was the higher the income earned. This result appears to provide further support for the hypothesis that with age the respondents gained seniority in their jobs which translated into increased income levels. Income was also higher among those respondents who had accessed vocational rehabilitation services. Therefore, a positive outcome of vocational rehabilitation, at least among this group of persons with spinal cord injuries, was a higher level of income once employed.

Table 14

Explanations of Employment Income Differences Among the Employed

Dependent Variable	Independent Variable	b	SE B	Beta	TSig	R^2
Employment Income	Age	1570.44	692.96	.351	.031	
	Education Level	5317.64	2885.22	.281	.076	
	# Type of Disability	-3961.67	3845.20	-.148	.311	
	## Mode of Mobility	1799.47	13025.25	.021	.891	
	Vocational Use or Not	22868.45	10934.19	.314	.045	
(n = 35)	(Constant)	-84868.36				.430

Quadriplegia or Paraplegia

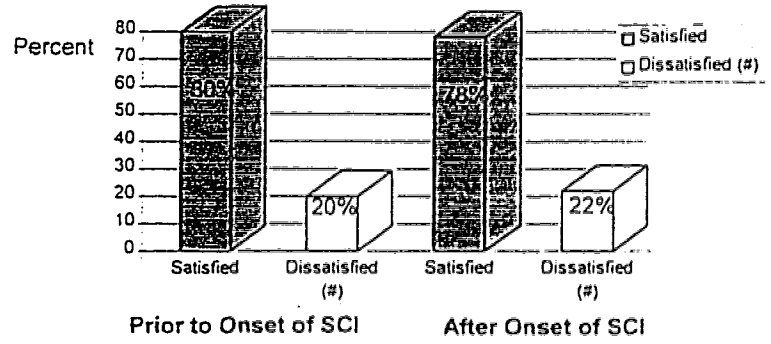
Wheelchair User or Non Wheelchair User

Work Satisfaction.

An important variable that seems to contribute to meaningful employment is work satisfaction. In considering job satisfaction is important to note that workers may report overall satisfaction but when asked about liking specific aspects of their jobs they may provide different responses (Krahn & Lowe, 1993). Nevertheless, several agents may affect work satisfaction and in turn contribute to meaningful employment. Work offers individuals the opportunity to participate in productive activity, practice valued skills, and maintain social relationships (Landy, 1985). Thus, the satisfaction derived from work may contribute to employment that is meaningful. This in turn may enhance overall quality of life.

Respondents were asked how satisfied they were in their jobs before and after their injuries. This measure of general satisfaction was based on respondents rating their level of job satisfaction (from very unsatisfied to very satisfied) using a Likert scale. Individuals indicated little difference in their level of satisfaction over the pre and post-injury periods (refer to Figure 2). While it was expected that level of satisfaction would substantially decrease after the injury because individuals changed work roles and on average were being paid less, individuals may have been content knowing that they were employed at all.

Figure 2
Level of Satisfaction With Work *



Included neutral responses

* Questions:
1. How satisfied were you with the job you had in the six months before your injury?
2. How satisfied are you in your current job (or most recent job)?

Respondents were also asked about the presence of certain job attributes which may contribute to meaningful employment. According to Lock (1976) (cited in Landy, 1985), various events, conditions and agents affect job satisfaction. Specific events or conditions include the work itself (the challenge, the physical demand, and the personal interest), the reward structure, and the working conditions (physical, and the ability to attain goals). The agents include how an individual perceives him/herself in relation to the work, the relationship with supervisors and coworkers, the management of the organization and the fringe benefits that might exist. The job attributes examined in this study are similar to those described by Lock (1976) and include agents and conditions such as remuneration, promotion opportunities, security and type of work. As illustrated in Table 15 the level of agreement that participants noted in describing their jobs before and after the onset of spinal cord injury.

Table 15

Job Attributes Relevant to Meaningful Employment

Pre-Injury Employment			Most Recent Post-Injury Employment		
Job Attribute	**% Agree**	**Total N (#)**	**Job Attribute**	**% Agree**	**Total N (##)**
Involved in Manual Work	84.2	56	Involved in Office Work	62.5	40
Related to Training	50.0	58	Related to Training	60.0	40
Good Pay	75.9	57	Good Pay	24.4	41
Good Chance of Promotion	59.7	57	Good Chance of Promotion	31.6	38
Good Benefits	59.7	57	Good Benefits	33.3	39
Interesting	80.7	58	Interesting	92.5	40
Expected Job	74.1	58	Expected Job	37.5	40
Secure	63.8	59	Secure	42.2	38

\# Each of these questions were asked of all participants who worked in the six months before injury onset.

\## Each of these questions were asked of all participants who had worked at anytime since injury onset.

As shown in Table 15 after the onset of spinal cord injury, as compared to prior to the injury, respondents were less likely to agree that they were being paid well, that they had opportunities for promotion, that the benefits received through work were good, that the jobs they held were expected for this stage of their careers, and that their positions were secure. Interestingly, a larger percentage of respondents indicated that the work was interesting after the injury in comparison to jobs held before the onset of injury. Given that fewer respondents indicated strong agreement to almost all of the questions related to the attributes that contribute to meaningful employment, and that they also indicated that they showed little change in satisfaction before and after injury, this

provides more support for the hypothesis that individuals may be satisfied with their work as a function of merely being employed. In other words, the employment expectations of sample members may have declined after their injury.

Consistent with the other variables that have been examined as contributing to meaningful employment, several correlates were considered with current global job satisfaction. As displayed in Table 16 a substantial proportion of respondents were satisfied with their most recent jobs. Response patterns seemed to indicate that a greater percentage of individuals residing in urban areas in comparison to rural communities were satisfied with their jobs. A greater proportion of those who have been injured longer were satisfied, and slightly more of the older in comparison to the younger group were satisfied. Although the difference is small and not statistically significant, among persons with paraplegia approximately 88% were satisfied in comparison to 74% of those with quadriplegia. Interestingly, persons who are wheelchair users were more likely than non-wheelchair users to be satisfied with their work. Finally, differences were statistically significant ($p < .05$, Chi-square test) when work satisfaction and education level were analyzed. Respondents with advanced education were more likely to be satisfied with their work. Perhaps this was because with enhanced training, skills may be varied and job opportunities more apparent.

Table 16

Current Satisfaction With Work By Selected Correlates

Correlates	Satisfied With Work	
	%	N
Total	78.0	32
Gender		
Female	100.0	4
Male	75.7	28
Age		
15 - 44	75.0	24
45 - 64	88.9	8
Current Residence		
Rural (population < 10,000)	64.3	9
Urban (population > 10,000)	85.2	23
Education Level		
Up to High School Graduation	42.9*	3
Beyond High School Graduation	85.3*	29
Disability Type		
Quadriplegia	73.9	17
Paraplegia	88.2	15
Mode of Mobility		
Wheelchair User	81.8	27
Non Wheelchair User	62.5	5
Years Since Onset of SCI		
1 - 5 Years	62.5	5
6 - 12 Years	66.7	8
13 - 18 Years	90.9	10
19 - 38 Years	90.0	9
Use of Vocational Services		
Yes	71.4	15
No	85.0	17

* Differences are statistically significant ($p < .05$, Chi-square test).

Multiple regression analysis was used to determine the net effects of age, years since onset of disability, education level, disability type, mode of mobility, professional or

non-professional jobs, and employment income in explaining the work satisfaction reported by the participants. As indicated in Table 17, only 18% of the variance in satisfaction can be explained by the above independent variables.

Although significant differences in job satisfaction were not evident when the above variables were considered, type of disability and employment income appear to make the strongest contributions to level of satisfaction. Employment income appears to contribute the most to the level of work satisfaction indicated by the participants. Consequently, those who earn more were more satisfied with their work. When type of disability was considered, persons with quadriplegic-type injuries were more likely than persons with paraplegic-type injuries to be dissatisfied with their work. Perhaps this is because persons with quadriplegia face more challenges in the workplace than persons with less severe injuries.

Table 17

Explanations of Work Satisfaction Differences

Dependent Variable	Independent Variable	b	SE B	Beta	TSig	R^2
Satisfaction	Age	.001740	.022944	.017	.940	
	Years Since Onset	.019094	.025102	.169	.453	
	Education Level	-.030284	.098804	-.065	.762	
	# Type of Disability	-.175808	.126814	-.251	.177	
	## Mode of Mobility	-.289490	.427931	-.129	.504	
	Non Prof or Prof	-.268692	.383448	-.141	.489	
	Employment Income	.000000	.000005	.281	.187	
(n = 41)	(Constant)					.182

Quadriplegia or Paraplegia

Wheelchair User or Non Wheelchair User

Table 18

Satisfaction With Work By Type of Employment

Type of Employment	Satisfied With Work	
	%	Total N
Laborer	100.0	2
Technical	100.0	9
Clerical	55.6	9
Food Services	50.0	2
Professional	81.3	16

Level of work satisfaction was further examined by type of employment. As shown in Table 18, all of those in the labour and technical fields indicated that they were satisfied with their work. The next greatest percentage of participants indicating work satisfaction were those who worked as professionals. Conversely, those who reported lower levels of satisfaction with their work were participants employed in clerical and food service jobs.

High levels of work satisfaction in the professional and technical fields seems consistent with the above hypothesis that specialized skills may be associated with work satisfaction. This hypothesis carries over when reduced satisfaction was reported by clerical and food service workers, as skill levels may be lower. The high level of satisfaction among labourers is consistent with some participants indicating that prior to injury they derived satisfaction from "work tasks involving physical labour". However, since only two respondents were in this category, we should not make too much of this finding.

Factors That Facilitate A Return To Employment

In the Abbott (1993) study, several factors were identified as being important in the return-to-work process. These factors included participation in contract-based work and

project-funded positions which served as stepping stones to further employment, the presence of other workers with disabilities in the work place, the use of vocational rehabilitation services, and access to aids and modifications. While attitudinal barriers, or the lack there of, also affected the re-entry process identified by the participants in the 1993 study, these potential barriers will be examined separately. It is important to note that rather than all of the previously-identified correlates being discussed in this section of the results, only those which demonstrate interesting patterns and/or statistically significant results will be reported.

Barriers/Facilitators Specific To Employment

Involvement in project-funded and contract positions.

Only a small portion of the respondents who had ever held a job since the onset of their spinal cord injuries indicated involvement in project-funded or contracted positions. As indicated in Table 19, 32.7% of the group indicated having being placed in project-funded positions. Project-funded positions are those that an individual was eligible to apply for because of certain personal and/or employment-related characteristics (for example, a history of chronic unemployment, or involvement in the labour force impeded because of disability). These positions were recognizable because of the government funding that was allocated to the employer to offset the wage paid to the employee.

Table 19

Involvement in Project Funded Positions

Correlates	%	Total N
Total	32.7	52
Disability Type		
Quadriplegia	46.2	26
Paraplegia	19.2	26
Mode of Mobility		
Wheelchair User	39.5*	43
Non-Wheelchair User	0.0*	9
Use of Vocational Services		
Yes	50.0*	24
No	17.9*	28

* Differences are statistically significant ($p < .05$, Chi-square test).

When disability-related correlates were considered, it was evident that a greater proportion of persons with quadriplegia than those with paraplegia had accessed employment opportunities that were subsidized by project funding (refer to Table 19). When mode of mobility was examined, 39.5% of wheelchair users have been in project-funded positions, whereas none of the non-wheelchair users had experienced this type of employment. Differences were statistically significant ($p < .05$, Chi-square test). Therefore, wheelchair users seemed more likely than non-wheelchair users to be employed in project-funded positions.

Looking more closely at those who have participated in project-funded positions, the results suggest that approximately 47% of these individuals had held one such position, 23% held two such positions, and the remainder of the group had been employed in more than two project-funded positions. Interestingly, over half of this participatory group indicated that involvement in project-funded positions did not serve as stepping stones to further employment. For those who did benefit by securing employment, approximately 35% of the group gained work on more than one occasion by establishing themselves in the project position.

Table 20

Involvement in Contract Positions

Correlates	%	Total N
Total	34.0	50
Disability Type		
Quadriplegia	44.0	25
Paraplegia	24.0	25
Mode of Mobility		
Wheelchair User	36.6	41
Non Wheelchair User	22.2	9

Totals may not equal 100% due to non-response.

An interesting pattern among the participants, although not statistically significant, was evident when disability type and mode of mobility were considered with involvement in contract positions. Contract position was defined in the questionnaire as an employment arrangement which continued for a pre-determined time frame. Thirty-four percent of the respondents had been employed in contract positions. When all responding participants were considered, 14% had worked in at least one such position, and the remaining 20% had worked in up to four different contract positions. The data suggests that those who were more severely injured and functionally impaired, were more likely to accept contract-based work assignments. As shown in Table 20, among persons with quadriplegia, 44% had held contract positions. Similarly, among wheelchair users, 36.6% had held contract positions.

Access to aids and modifications.

Close to 50% of persons with spinal cord injuries who responded to the Spinal Cord Injury - Work Survey indicated a need for assistive aids at the work site. Given this figure, it is important to consider whether or not they have access to the assistive devices that they reportedly need. Among employed respondents, 22.5% had access to a writing splint, 10% to a mouth stick, 27.5% to a computer, 20% to a personal assistant, and

7.5% to other assistive devices. When type of disability was considered, differences were statistically significant ($p < .05$, Chi-square test) with respect to a writing splint, computer, and personal assistant. Thus, respondents who were more likely to have access to a writing splint, a computer, and a personal assistant were more likely to be persons with quadriplegia.

A similar pattern emerged when mode of mobility was considered. It was evident that the more physically impaired the individual was, the more likely he/she had access to assistive devices in the workplace. For example, none of the non-wheelchair users had a mouth stick available at the work site Among wheelchair users however, approximately 28% had this assistive device in their work environment. Differences were statistically significant ($p < .05$, Chi-square test).

Respondents also reported having had access to additional devices not listed in the questionnaire. These included: a reacher, a typing splint, and an accessible washroom. Differences were found to be statistically significant ($p < .05$, Chi-square test) for years of onset, with 30% of those injured 19 - 38 years ago being the most likely to have access to such aids. No one who had been injured from one to 18 years ago had access to 'other' assistive devices in the workplace.

Use of vocational rehabilitation services.

The use of vocational rehabilitation services may be critical to the return to work process following the onset of spinal cord injury. While this factor was used as a correlate in describing the employment situation among the participants, it was also important to examine it as a separate variable. As noted in Table 21, significant differences ($p < .05$, Chi-square test) were evident when age and disability type were considered. A greater percentage of persons with quadriplegic-type injuries (56%) than those with paraplegic-type injuries (28%) had accessed these services. Wheelchair users were also more likely than non-wheelchair users to access such assistance. Among the respondents who were between the ages of 15 and 44, 56% had used vocational services. This compared to only 20% of those who were between the ages of 45 and 64. It was also interesting to note that a greater percentage of persons who had been injured from

six to eighteen years ago had used the services of a vocational rehabilitation specialist. This pattern may be present because those individuals who had recently been injured may not be aware of the services available to them or may not be ready to consider a return to employment given the newness of the injury. For those injured over eighteen years ago, vocational services may not have been readily available.

Table 21

Percentage Using Vocational Rehabilitation Services

Correlates	%	Total N (#)
Total	43.9	82
Gender		
Female	27.8	18
Male	48.4	64
Age		
15 - 44	56.4*	55
45 - 64	20.8*	24
Current Residence		
Rural (population < 10,000)	37.9	29
Urban (population > 10,000)	47.2	53
Education Level		
Up to High School Graduation	37.0	27
Beyond High School Graduation	47.3	55
Disability Type		
Quadriplegia	55.6*	45
Paraplegia	27.8*	36
Mode of Mobility		
Wheelchair User	46.5	71
Non Wheelchair User	27.3	11
Years Since Onset of SCI		
1 - 5 Years	23.8	21
6 - 12 Years	57.1	21
13 - 18 Years	52.6	19
19 - 38 Years	45.0	20

Totals may not equal 100% due to non-response.

* Differences are statistically significant ($p < .05$, Chi-square test).

In order to better understand the value of vocational rehabilitation services in the return to work process, participants who had accessed these services were asked to indicate their experience with vocational assessment, career counselling, and placement. As defined on the questionnaire, vocational assessment included the gathering of

information on the type of work an individual may have done in the past, completing interest and aptitude inventories, and examining what an individual might do in the future. Career counselling was defined as guiding a person into an appropriate field of employment, providing job referrals and assisting with resume preparation. Placement referred to assisting a person in being placed into a temporary or permanent job. Participants were also asked to rate the quality of the services. Table 22 outlines the participant's experience with and ratings of three aspects of vocational rehabilitation.

Table 22

Experience With Vocational Rehabilitation Services

Service Provided	% Used	Total N	Range of Hours	$\bar{x}$ Hours Since Injury	Quality % Good
Vocational Assessment	63.9	36	1-100	16.9	69.6
Career Counselling	61.1	36	1-100	16.6	50.0
Placement	33.3	36	1-240	32.9	33.3

As noted in Table 22, approximately two-thirds of the participants who had accessed vocational rehabilitation since the onset of their injuries made use of vocational assessment and career counselling services. Among those individuals, a larger percentage rated the vocational assessment services in comparison to career counselling services as being good. Only one third of those who used placement services rated them favourably and two thirds of the group rated the service neutrally.

Given that vocational rehabilitation may facilitate a return to work after injury, it is helpful to examine the reasons why respondents rated vocational assessment, career counselling, and placement services poorly. When commenting on vocational assessment services, one respondent indicated that he gave a poor rating because there was "no explanation of results and no referral to educational programs." Another individual reported that "I didn't receive a lot of guidance one way or the other." When

commenting on career counselling one individual reported that "counselling was not helpful in providing me with any new information", and other participants indicated that the advice given was "unpractical and unrealistic" and that counselling "gave me no real idea about a career to pursue." Finally, in explaining a poor rating of placement services, a respondent commented that "it was a government funded placement. The employer was looking for free labour. He invested no time in training or other useful tools to better his employees". Given the information provided by the above respondents, suggestions for improving the value of vocational rehabilitation services for persons with spinal cord injuries will be discussed in the next chapter.

All of the respondents were asked about how easy it is to access vocational rehabilitation services. Sixty-one percent of those who answered the question reported that it was easy. Interestingly, only 32% of all participants reported that they would in fact use the services if they were available to them. And only one-third of the group indicated that vocational rehabilitation is useful in finding paid employment. Participants were also asked to indicate who helped them the most in searching for and/or returning to work. The person reported most often was the individual him/herself. The next most frequent responses included their spouse and children, and the Canadian Paraplegic Association.

Presence of other workers with disabilities in employment.

Participants in the Abbott (1993) study reported that a common and important feature of their work environments was the affiliation with other persons with disabilities during the completion of employment duties. In order to further examine this issue, respondents in the current study were asked about the presence of other persons with disabilities in the workplace.

Table 23

Presence of Other Workers with Disabilities in Employment

Correlates	%	Total N
Total	56.9	51
Age		
15 - 44	51.4	35
45 - 64	68.8	16
Disability Type		
Quadriplegia	64.0	25
Paraplegia	50.0	26
Mode of Mobility		
Wheelchair User	61.9	42
Non-Wheelchair User	33.3	9
Years Since Onset of SCI		
1 - 5 Years	55.6*	9
6 - 12 Years	35.7*	14
13 - 18 Years	50.0*	12
19 - 38 Years	81.3*	16

* Differences are statistically significant ($p < .05$, Chi-square test).

As shown in Table 23, approximately 57% of employed persons with spinal cord injuries who completed the questionnaire worked with other persons with disabilities. When age was considered, a relatively equal percentage of that group fell in the younger and older age groups. Similarly, there was a comparable distribution of persons with quadriplegia and persons with paraplegia with the above variable. While wheelchair users were more likely than non-wheelchair users to work with other persons with disabilities, the differences were not statistically significant. Differences were significant ($p < .05$, Chi-square test), however, for years since onset of spinal cord injury. Results indicated that among those injured 19-38 years ago, 81.3% worked with other persons with disabilities.

In order to examine this feature of employment further, respondents were also asked to rate the degree of importance of having coworkers in the workplace who have physical

disabilities. Eighty-eight percent indicated that it was not at all important, 4% reported it to be very important and 8% responded neutrally.

Attitudes

Table 24 provides some interesting data on four items that were incorporated into the questionnaire regarding the personal attitudes held by the participants. These items were:

1. Employers are biased against people with a spinal cord injury.
2. Most employers discriminate against persons with physical disabilities.
3. Most employers are willing to hire someone with a physical disability.
4. Most employers welcome persons with disabilities into the workplace.

Table 24

Attitudes

Attitudinal Questions	Agree	Neutral	Disagree	
	%	%	%	Total N
Employers biased against persons with disabilities	34.6	32.1	33.3	78
Employers discriminate against persons with disabilities	27.9	35.4	36.7	79
Employers are willing to hire persons with disabilities	9.0	48.7	42.3	78
Workers welcome persons with disabilities into the workplace	19.5	44.2	36.3	77

The participants who responded to the questions regarding perceived discriminatory attitudes towards persons with disabilities held by employers were equally distributed along the Likert scale. Approximately 35% of the respondents agreed that employers are biased against persons with disabilities, 32% were neutral, and 33% disagreed. Likewise, approximately 28% of the group agreed that employers discriminate against persons with disabilities, 35% were neutral, and 37% disagreed.

An interesting pattern is present among ratings of the statement: Most employers are willing to hire someone with a physical disability. Only 9% indicated agreement, 49% responded neutrally, and 42% disagreed. Thus, even though approximately one-third of the group believed that employers discriminate against persons with disabilities, almost 50% of them reported that employers may or may not be willing to hire members of this group. Perhaps this group have had little post-injury experience with employers. When asked whether workers welcome persons with disabilities into the workplace, 20% of the participants indicated agreement, 44% were neutral, and 36% disagreed. This pattern appears to suggest that the participants believe that employers are unwilling to hire persons with disabilities and they attribute this, at least in part, to employers' discrimination and bias. Once hired, participants may hold the perception that they are not eagerly welcomed into the work place.

Attitudes can be further examined by considering the employment status of the respondents. Table 25 outlines response patterns to the four attitude questions of those who were employed at the time of responding to the questionnaire.

Table 25

Attitude Response Patterns By Employment Status

Attitudinal Statements	Agreement By Employment	
	%	Total N
Employers biased against persons with disabilities	36.4	33
Employers discriminate against persons with disabilities	36.4	33
Employers are willing to hire persons with disabilities	15.2	33
Workers welcome persons with disabilities into the workplace	28.1	32

As shown in Table 25, the proportion of employed participants who indicated agreement with the statements regarding employer's bias or discrimination toward persons with disabilities was equal (36.4%). A smaller proportion (15.2%) of the employed respondents indicated that employers are willing to hire persons with disabilities. A larger proportion of those employed (28.1%) reported that coworkers would welcome persons with disabilities into the workplace. These responses are interesting. In spite of these individuals being employed, over one third of them perceive employers to be discriminatory, and fewer perceive a willingness to hire persons with disabilities. Thus, it seems as though the perceptions that persons with spinal cord injuries hold around employers' attitudes may affect perceived opportunities for alternate places of employment. For example, if a person with a spinal cord injury is working but perceives that potential employers are discriminatory toward persons with disabilities, he/she may not consider changing his/her place of employment. Therefore, mobility in employment may be limited. Whether in fact employers do present such attitudes is beyond the scope of this study.

Summary

The results chapter of this thesis highlighted the characteristics of the sample. Data that described the productive activity of the participants and the related characteristics of their employment experiences were also presented. Finally, results were presented regarding several factors that may hinder or facilitate access to meaningful employment for persons with spinal cord injuries. The next chapter will examine these results with respect to the original research questions, and in relation to the existing research and literature in the field of vocational rehabilitation. Finally, suggestions for program delivery and future research will be made.

CHAPTER FIVE
DISCUSSION

The Spinal Cord Injury - Work Survey was mailed to 400 Albertans with spinal cord injuries. While the return rate of the questionnaire was low at 21%, the sample appeared to be representative of the population. Basic demographic details provided some valuable information which was used to examine the employment circumstances of this group. The majority of the respondents were male, and 98% of the group were of the typical working age (15 - 64). Slightly more of the respondents had quadriplegic type injuries in comparison to paraplegic-type injuries which was relatively consistent with the population of members of the Canadian Paraplegic Association - Alberta. The majority of the respondents required a wheelchair for mobility. The average number of years since onset of injury was 12.

A movement from rural to urban Alberta after the onset of injury was evident. Respondents reported that relocation was required in order to be closer to their support systems, to live in a wheelchair-accessible environment, and to access educational opportunities. Perhaps this indicates that services need to be further developed for persons with disabilities who, at the time of injury, reside in rural communities. There appeared to be a trend for participants to increase their level of education after injury, and some made significant advances. The reasons given for upgrading their educational standings were to further advance their level of education, to prepare for jobs or careers,and/or to advance their existing careers.

This chapter will review the major findings of the research and relate those findings to the literature. Implications of the research will also be discussed. Finally, recommendations for further study into the employment experiences of persons with spinal cord injuries will be made.

Major Findings

This study was designed to answer three questions: What is the employment

situation among Albertans with spinal cord injuries? Secondly, what factors facilitate access to meaningful employment for Albertans with spinal cord injuries? Thirdly, are the factors identified as influencing labour force participation of persons with spinal cord injuries similar to those in the Abbott (1993) study? The following discussion summarizes the major findings from this study to answer these questions.

The Employment Situation

Results indicated that participation in employment decreased after the onset of spinal cord injury. Sixty-two percent of the participants were working before the injury and only 42% were working after the spinal cord injury. This rate of employment for persons with spinal cord injuries falls within the range (27% - 66%) reported by American researchers (Belgrave & Walker, 1991; Young et al., 1994). The proportion of the sample who were working after injury was consistent with the rate (45%) reported by Karp (1989) but low in comparison to the percentage (68%) of all Albertans with disabilities (Health and Activity Limitation Survey, 1992). This employment rate was also low in comparison to 78% of the general population of Albertans who are employed (HALS, 1992). This lack of employment activity among persons with spinal cord injuries parallels reports by Agocs et al. (1992) who indicated that opportunities for competitive employment for this group are limited.

When labour force participation was examined further, one third of the sample had never worked since injury onset. While this study does not provide answers to why these individuals had never worked, this lack of labour force participation indicates these individuals are significantly employment-disadvantaged.

Not only was the sample of Albertans with spinal cord injuries disadvantaged in terms of employment activity, they were also working fewer hours per week after injury. There was a decrease in the average working hours from 32 to 17. The respondents reported a lower average number of working hours per week in comparison to the Canadian population in 1994, who worked an average of 30 hours per week (cited in Perspectives on Labour and Income, 1995) .

While there was a decrease in the number of hours spent in paid employment per week, involvement in volunteer work increased. Is this trade off reflective of choice or limited opportunities for paid work? Perhaps volunteer work is a catalyst for paid employment as it offers the opportunity to develop skills in preparation for labour force participation. Nonetheless, these findings provide good reasons to find ways to increase employment opportunities for people with spinal cord injuries.

Characteristics of the employed.

Several demographic characteristics were examined among the employed participants. Interesting patterns were evident when type of disability, mode of mobility, and level of education were considered. It is important to remember that an incomplete spinal cord injury may result in a person maintaining the ability to walk (a non - wheelchair user) while sustaining an injury at the cervical level (quadriplegic type injury). When type of disability was examined, there was a relatively even distribution of working persons with paraplegia and working persons with quadriplegia. This is an interesting result because earlier research offers two differing hypotheses related to this issue. According to El Ghatit and Hanson (1978), individuals with paraplegic injuries are more likely to obtain employment than those with quadriplegic injuries. Goldberg and Freed (1982), and Kemp and Vash (1971) would dispute this claim as they indicated severity of disability (determined by level of injury) was not associated with employment productivity. What the above studies failed to examine however, was the severity of disability defined by the physical capabilities implied by mode of mobility.

The present study emphasized the importance of mode of mobility as an indication of physical capacity. Participants were asked whether or not they used a wheelchair for mobility most of the time. Based on their responses, individuals were grouped as non-wheelchair users (less physically impaired) and wheelchair users (more physically impaired). Even though the small number ($n=11$) of non-wheelchair users in the sample makes interpretation difficult, past research has not examined this group and it is therefore a critical variable to consider. With this caution in mind, the results indicated

that a greater percentage of non-wheelchair users than wheelchair users were employed. This seems to suggest that the limitations imposed by the onset of spinal cord injury, where a wheelchair is required to enhance mobility, may affect access to employment.

Another finding indicated that individuals with a level of education limited to high school or less were least likely to be among the employed group. This is consistent with El Ghatit and Hanson (1978) and Treischmann (1980), who indicated that employment opportunities are limited with a high school education. These authors also reported that an advanced level of education was associated with employment following spinal cord injury. In contrast, the present study found that even with an advanced level of education (beyond high school) participants had an equally likely chance of being employed or unemployed after injury.

Does advanced education pay off in terms of employment? Employment options appear to be limited with low levels of education. However, with a difficult labour market even those with more education find themselves unemployed. Yet persons with a better education have a higher probability of being employed. While it is probably obvious to the reader, access to the labour market may be impeded further by the very fact that the participants have physical disabilities. Physical, procedural, and attitudinal barriers may exist and inadvertently prevent equal access to employment opportunities.

Type of employment.

When job classifications were considered, a large percentage of the respondents reported being involved in labour-intensive occupations before the spinal cord injury. A noticeable lack of participation in this occupational field was evident after injury. This is not surprising because those involved in occupations requiring physical agility could no longer perform such tasks because of the limitations imposed by the spinal cord injury. This was consistent with the large percentage (86%) of individuals in the sample who reported that they require a wheelchair for mobility. This is also consistent with Krause and Anson's (1996) study that examined the reasons persons with spinal cord injuries give in explaining why they are not employed. A stratified random sample of

231 persons with spinal cord injuries completed a revised version of the Life Situation Questionnaire (Krause & Anson, 1996). The most frequently cited reason for not working was the inability to perform their old job. These individuals reported that reduced health and endurance created these physical limitations.

What fields of employment do the labourers move into after the injury? The results suggested that the greatest percentages of labourers moved into clerical positions and the professions. When participation in clerical work was examined for the entire group, a greater proportion of wheelchair users in comparison to non-wheelchair users occupied these positions. These patterns are consistent with Galt (1993), Roessler (1987), and Ross and Shillington (1990), who concurred that persons with disabilities often find themselves in low paying clerical jobs.

Results indicated that some individuals did in fact take part in extensive upgrading. If the person had been a labourer, a significant amount of education and/or training might have been required and the existence of transferable skills might have been limited. When professional jobs were considered, the overall increased involvement in these jobs after injury was consistent with an increase in education level by a large number of the respondents.

More persons with quadriplegia and more wheelchair users moved into professional jobs. This might be a result of these job duties requiring less physical agility. As long as individuals receive adequate training, career opportunities in the professions seem not to restrict persons with spinal cord injuries, perhaps because of the limited physical demands. Finally, with a noticeable increased participation in professional type jobs after injury, the results are contrary to previous writings of Galt (1993), Roessler (1987), Ross and Shillington (1990), and Vargo (1991), who reported that persons with disabilities are typically under-represented in managerial and professional positions. The present research indicated that this under-representation is probably not because of lack of willingness on the part of the person to upgrade, as nearly 50% of the participants increased their level of education after injury.

Full-time work, permanent work, and flex-time.

Among the working respondents, only slightly more than 50% were working full-time. When compared to 83% of Canadians at large who work full-time, the study group was significantly employment-disadvantaged (Krahn, 1995). The respondents were also disadvantaged in the labour force in comparison to the general population as a smaller proportion held permanent positions (sample - 71%, general population - 91%).

Do employers offer reasonable accommodation to persons with spinal cord injuries through the provision of flexible work schedules? Sixty percent of the respondents indicated that it is important to have flexible work hours primarily to manage personal care issues related to their physical disability. Yet only 48% of the group actually had the option of working flex hours. Therefore, the accommodation of personal care needs for persons with spinal cord injuries does not seem adequate.

Interestingly, the results indicated that the option of working flex hours was more readily available to the respondents residing in a rural community. Are employers more amenable to flex hours in rural centers because of the nature of the work or do they have a better understanding of the needs of persons with disabilities? Given that formal rehabilitation programs are located in urban centers and that respondents indicated that they moved to urban centres to live in wheelchair-accessible environments, one would think that employers in urban centers would be more aware than employers in rural communities of the needs of persons with disabilities. On the other hand, perhaps those who return to rural settings after injury are accommodated more openly because they are known by the community.

Income.

Even though people were injured on average as many as 12 years ago, little difference in their average total income before and after injury was evident. One would expect that over a 12 year period income levels would rise. It appears, therefore that persons with spinal cord injuries are currently worse off in terms of overall income. However, when compared to other Albertans with a range of disabilities the overall

average income of the participants was higher. Albertans with disabilities have an average total income of $22,155.00 in contrast to the average total income of the study group at $30,449.00 (HALS, 1991). Even though the study group had an overall higher average total income, approximately one third of the group were living below the poverty line.

When the average employment income of all Albertans ($28,756.00 per year) was examined, the respondents ($15,545.30 per year) were significantly disadvantaged. When gender was considered, males earned more than females, a pattern similar to that for Albertans in general (Perspectives on Labour and Income, 1995).

An interesting and rather unusual pattern emerged when the association between the use of vocational rehabilitation and employment income was examined. First, among those who used vocational services the greatest proportion were not employed at the time of completing the questionnaire and therefore had no employment income. Secondly, those who did not use vocational services were more likely than those who did to be in the top income group. Perhaps the top income earners had time to build skills and seniority in their jobs and had not accessed vocational rehabilitation services because they were not readily available at the time of injury. This explanation appears to be supported by the fact that with age income increased. Furthermore, when multivariate analysis was done it was apparent that age explains the largest share of the variation in income. The results also appear to indicate that the middle-income earners are likely those employed individuals who used vocational services. This pattern suggests that vocational counsellors are suggesting jobs that offer salaries in the middle income group or that these individuals have gained work skills that are consistent with middle-income jobs. An alternate explanation for this pattern is that persons who access vocational rehabilitation services are those who are worse off in terms of transferable skills, employment readiness, and/or adjustment to disability.

Work satisfaction.

The final employment situation characteristic that was examined in this study was

work satisfaction. Intuitively one would expect work satisfaction to decrease after injury as a result of the range of possible barriers that persons with spinal cord injuries could face in accessing and maintaining employment. However, the results indicated that there was little difference in work satisfaction before and after the spinal cord injury. Regardless of evidence that participants were paid poorly, that their work offered few promotional opportunities, that their jobs lacked security and good benefits, they indicated satisfaction with their work. Perhaps dissatisfaction around these poor working conditions was minimized by the very fact that these respondents were employed. Furthermore, the respondents indicated that their jobs were interesting and this could contribute to work satisfaction.

Labourers, although there were only two in the group, who maintained their work after injury were satisfied. This is understandable because they maintained the physical capacity to do their work in spite of the possible limitations imposed by spinal cord injury. High rates of satisfaction were also reported for those working in the technical and professional fields where advanced training would be required. This is consistent with the finding that a great proportion of the group who have advanced levels of education are satisfied in their jobs. However this is unlike the trend reported by Krahn and Lowe (1993) that higher job expectations may be associated with more education and reduced satisfaction with work.

Consistent with the results of the 1989 General Social Survey (cited in Krahn & Lowe, 1993), older workers reported greater job satisfaction. While older workers might have lower expectations of their work, might be accepting of unrewarding work, or have interests other than work, coping with disability over time appears to be more important than the effects of age among the study group. For example, in the initial period after injury when employment is being pursued an individual may have a limited perspective of the available options. As a result he/she may accept any offer that is presented. Furthermore, in these early stages the individual may be struggling to regulate and coordinate personal care routines which may place extra strain on the work schedule. Over time the individual may be better able to manage his/her disability and while at

work focus on the job's intrinsic rewards.

Wheelchair users were more satisfied with their work than were non-wheelchair users. For wheelchair users, employers and coworkers may glorify the disability. For example, a person with a spinal cord injury may receive accolades for the completion of simple work tasks as a result of the employer's attitude that it is amazing that he/she has even re-entered the work force. As a result of this reinforcement work satisfaction could be higher. For non-wheelchair users, the impairments that result from a spinal cord injury often remain hidden. The non wheelchair user still may be challenged by lack of bowel and bladder control as well as other neurological complications. With this hidden disability of the employee, the employer may be unaware of the medical complications that may ensue. In turn, this lack of understanding may lead to dissatisfaction on the part of the employee. Although levels of work satisfaction varied with mode of mobility, the type of disability contributed more to satisfaction when the effects of other variables were controlled. Persons with quadriplegia were more likely to be dissatisfied with their work than persons with paraplegia. Work dissatisfaction among persons with quadriplegia might be explained by the physical challenges that they face in their work. Additional analysis revealed that persons with quadriplegia were more likely to be in professional jobs, but still reported less work satisfaction. Perhaps this is because they feel their employment options are limited.

When the effects of other variables were controlled, employment income was found to contribute the most to level of job satisfaction. Those who earned more in their jobs were the most satisfied. It appears as though income level is an important job-related reward for the participants which affects their reported satisfaction with work.

Features That Facilitate Access To Employment

The Abbott (1993) study identified a range of factors that influenced the employment experience among persons with severe spinal cord injuries. As will be discussed below, these factors also had an impact on the employment experiences for the participants of the present study.

Project-funded and contract positions.

When participation in, and the value of, project-funded positions were considered, interesting nuances were evident. Unlike the substantial research that indicates that non-standard work offers "less job security, lower pay and fewer fringe benefits" (cited in Krahn, 1995) which creates inequality in the labour force, the Abbott (1993) study and the present research demonstrated the value of this type of employment. Although persons with spinal cord injuries would likely prefer permanent full-time work, participation in project-funded and contract positions were beneficial factors in accessing meaningful employment for persons with severe spinal cord injuries (Abbott, 1993). These work arrangements allowed individuals to gain experience and prove their capabilities in the employment arena. In the current study, one-third of those who had held a job since injury onset were employed in project funded positions. A greater proportion of this group had quadriplegic injuries and were wheelchair users. These participant characteristics are similar to those identified in the Abbott (1993) study that focused on re-entry to employment experiences of persons with quadriplegia. While the overall percentage of persons who accessed project-funded positions was low (32.7%), the result is important for those who did obtain employment.

Perhaps project-funded positions are an important starting place for the newly injured and for the employer who has never hired a person with a disability. For example, the employee may be given the opportunity to access employment and therefore an opportunity to develop skills and prove his/her abilities. The employer commits to hire the employee for the project and has little financial obligation in the process. Therefore, if project funded positions are used appropriately they may offer a beneficial starting point for persons with spinal cord injuries (not where the employer accesses free labour without the individual with the disability gaining from the experience). Furthermore, non-standard work may be valued because it is relative when the only alternative is unemployment.

When compared to the Abbott (1993) study, a key component of the project-funded position was missing. Over half of the group indicated that project-funded

positions did not serve as a stepping stone to further employment. In spite of this, participants might have benefited from the experience because they were given the opportunity to develop skills and confidence, and could document their work experience. While 50% of those who participated in government sponsored positions did not gain regular work, for those who did the benefits were substantial - they found work!

Participants were more likely to be employed in contract positions if they were more severely disabled (persons with quadriplegia and those who used a wheelchair for mobility). There are at least two reasons why persons with more severe disabilities might work in contract positions. First, persons with more severe disabilities may accept contract positions when other opportunities are lacking because they may believe that their options are limited. Secondly, because of the physical limitations that are concomitant with quadriplegia, these individuals may accept contract work rather than permanent positions so that they may deal with possible health concerns or stamina issues.

Need for and access to aids and modifications.

As indicated in the results chapter of this thesis, almost 50% of the respondents required aids in the workplace, yet only 19% have access to aids. Eighty percent require building modifications of some sort (for example, wide doorways, and accessible washroom, and access into building) and only 48% actually have access to modifications in the workplace. Given this difference, it is evident that persons with disabilities in this study were not reasonably accommodated. Therefore, physical barriers continue to prevent access to employment.

Use and type of vocational rehabilitation services.

Participants had a slightly better chance of being employed if they had used vocational services but of those who used these services, less than half of them reported being employed at the time of completing the questionnaire. Hence, the data appears to indicate that vocational rehabilitation may not be a strong determinant in gaining

employment. In order to examine possible explanations for this, it is important to look at the characteristics of those who did access these services.

Consistent with the Abbott (1993) study, the results of the present study indicated that persons with more severe spinal cord injuries were more likely to use vocational rehabilitation services. Individuals were also more likely to have used these services if they were injured between 6 and 18 years ago. This appears to suggest that in the first five years after injury physical care activities and not a return to work take priority. And for those injured more than 18 years ago, vocational assessment, counselling and placement services may not have been readily available.

The type of vocational rehabilitation services most often used was also examined. Vocational assessment and career counselling were those services most often used by the participants. The respondents were less likely to access placement services. Those who did use placement services, generally did not give them a high rating in service quality. The primary problem with these services seemed to focus on poor placement rates. Suggestions for improvement included the provision of service that offers the possibility for employment opportunities and not just the "use" of human resources on a temporary "employer focused for benefit" basis. Respondents also reported that the quality of service in the various domains of vocational rehabilitation could be improved by providing guidance that is realistic given an individual's physical limitations, giving new information (not only the basics such as resume preparation), and providing a clear explanation of the process and results of vocational assessments.

Vocational rehabilitation services must be revised so that a comprehensive service can be offered to persons with disabilities. First, even though respondents were slightly more likely to be employed if they had used vocational services, many who did use these services were not successful in securing employment. Second, access to placement services appeared to be problematic in the provision of a multi-faceted vocational rehabilitation program. Therefore, vocational services must focus on assessment, preparation, and placement. With a greater focus on obtaining work experience, work placements could be arranged. Follow-up for those involved in placements may ensure

skill development, positive work experiences, and opportunities for meaningful employment.

While the opportunities for employment may be improved through the provision of vocational rehabilitation services, will individuals with spinal cord injuries use these services if they are available to them? Even though respondents generally indicated that services were easy to access, most indicated that they would not use them even if they were more readily available. Is there a stigma attached to using vocational services? Do vocational rehabilitation services isolate persons with disabilities from mainstream employment options? Are vocational services necessary?

Although respondents said they would not use vocational services, approximately two thirds of the group reported that vocational rehabilitation is useful in finding employment. However, an overwhelming majority of the respondents indicated that the person/agency who helped them the most in searching for and/or returning to work was themselves. The most helpful agency was the Canadian Paraplegic Association. Therefore, successful re-entry to employment might be achieved by the combining counselling services typical of those offered by the Canadian Paraplegic Association where self-reliance is encouraged, along with vocational rehabilitation (assessment, career counselling and placement services).

In order to address the issue of self-reliance, rehabilitation professionals might want to place a greater emphasis on facilitating functional skills and coping strategies. For example, assisting individuals to develop problem-solving and decision-making skills may facilitate effective management of employment preparation, employment search, and ultimately placement. Curnow (1989) also suggests that counsellors must assist clients in coping with feelings and attitudes about disability so that they can set realistic vocational goals. One might base the development of coping strategies on the work of Wright (1983), and Mayer and Andrews (1981). Working on value changes by perceiving specific aspects of the spinal cord injury (for instance, the inability to move the lower extremities) as "impaired tools" rather than viewing the disability as all encompassing, may be beneficial in containing the effects of disability (Wright, 1983).

In this process of value change, the individual with a spinal cord injury may encounter an altered self concept by perceiving the disability as a "challenge or facilitator of personal growth" (Mayer & Andrews, 1981). While persons with spinal cord injuries will undoubtedly struggle to achieve this ideal, the individual who is coping with the implications of spinal cord injury in this way may be able to put the disability into perspective in the process of re-entering the labour force. Furthermore, developing strong functional skills and facilitating positive value change may enhance self confidence so that individuals can continue to help themselves.

In assisting persons with disabilities with adjustment issues, counsellors could also employ the cognitive counselling approach suggested by Vargo (1992). Vargo (1992) proposes that psychological adjustment to acquired disability may be impeded by self-defeating thoughts. Cognitive distortions such as "I'm of less value as a person because I'm not able-bodied" and "I can't do things the way I used to, so why do anything at all?" are two of ten examples of self-defeating thoughts which may "perpetuate unhealthy reactions to oneself and to others" (Vargo, 1992, p. 88-89). In order to promote healthy adjustment to disability, clinicians can help their clients recognize, confront, and overcome these misconceptions. Counselling strategies that may be employed include asking the client for evidence to support the self-defeating thoughts, helping the client to reframe their experiences, and assisting the client in working through the important life questions that he/she is grappling with. By allowing clients to examine their beliefs around disability they may become more self-confident and self-reliant. Perhaps by including this form of intervention in the return-to-work process the benefits of vocational rehabilitation could be better realized.

Presence of other workers with disabilities.

Another factor that was examined among the employed participants was whether or not they worked with other persons with disabilities. While most of the participants said it is not important to work with other persons with disabilities, over half of those who responded indicated that they do work with other persons with disabilities. Among

those injured the longest (from 19 - 38 years) a significant proportion (81%) of them worked with other person with disabilities. Does this demonstrate the ghettoization of persons with disabilities? If it does, the results seem to indicate that over time there has been a decrease in ghettoization. A smaller proportion of those injured less than 19 years worked with other persons with disabilities. Conversely, the priorities of those injured longer may change. For example, they may choose to work in a place of employment where the employer and coworkers understand the needs of persons with disabilities. Such a workplace would likely exist where other persons with disabilities also work. In essence, it is difficult to determine whether this apparent ghettoization is the result of changes in the group or the labour market over time.

Does it matter if ghettoization does exist among this group? At least these individuals have managed to obtain employment. Through employment they are given the opportunity to develop skills and confidence which in turn may create enhanced options for future employment. Is this pattern a positive one given that they work with people who are like them? Perhaps they are alike in terms of disability and also in work ethic, skills, and aspirations. An employer's understanding of a person's disability-related needs might be prevalent in a place of employment where other persons with disabilities also work. Thus, individuals entering this environment might benefit especially during the initial orientation period. Furthermore, is this coming together in the place of work similar in the other sectors of the population?

An alternative explanation for the grouping of individuals with other persons with disabilities in employment might be that over time individuals are drawn toward work environments where other persons with disabilities are employed. If a person with a disability already works in a given place of employment it is more likely that the environment is physically accessible. It is also possible that employers may readily welcome other workers with disabilities into the labour pool because they have had experience with this group. In essence, the transition into a workplace that is wheelchair accessible and where coworkers are more accepting may be appealing for prospective employees with disabilities.

Attitudes.

The apparent attitudes of persons with disabilities around how they are treated by employers may also influence their employment experiences. Among those individuals who were employed, over one third still perceived employers to be discriminatory toward persons with disabilities. Furthermore, very few (15%) reported that they think employers are willing to hire persons with disabilities.

These findings appear to complement the results of a study conducted by Berry and Meyer (1995). Berry and Meyer (1995) examined the impact of situations and attitudes towards persons with a range of disabilities by their behavioral, affective and cognitive responses. Employers and coworkers of persons with disabilities were asked to complete the Attitudes Toward Disabled Persons Scale (Yuker, Block & Younng, 1996) and then indicated their reactions to a situation involving a person with a disability on the Multiple Affect Adjective Checklist (Zuckerman & Lubin, 1985). The results indicated that negative responses to contact with a coworker with a disability were associated with one's discomfort and attitudes towards persons with disabilities. Although employers' and coworkers' attitudes were not surveyed in this study, perhaps discomfort and attitudinal barriers created the perception that the respondents hold about employer's discriminatory practices and lack of willingness to hire persons with disabilities.

Implications of Findings

The Spinal Cord Injury - Work Survey provided useful demographic information about Albertans with spinal cord injuries, identified specific employment related characteristics among employed Albertans with disabilities, and examined the possible barriers and facilitators to employment for this group. Implications of the findings in each of the above the areas will be discussed separately.

Demographic Characteristics

More than half of the participants in the present study were unemployed. This

has implications for the individual, for government, and for society. Individuals will continue to struggle for independence (financially and emotionally) if they are denied access to meaningful work. Government will need to continue to support these individuals through programs such as Social Allowance or Assured Income for the Severely Handicapped. In a time of widespread cuts to social programs, the community will also be required to take responsibility for those who are denied life satisfaction and security that can be offered though involvement in work.

These low employment rates reinforce the need for developing and/or revising services for persons with spinal cord injuries. Given that little difference in employment rates were evident when severity of disability was considered, these services should continue to offer assistance to those with varying degrees of physical disability. It will be argued later in this chapter that psychological issues such as coping with disability, and readiness to embark on employment are areas that will require special attention in the delivery of vocational rehabilitation services.

It was also evident that participants had increased their levels of education. Therefore, not only does the employment sphere need to be prepared to offer something to these individuals, but also educational institutions must have an understanding of the needs of this group and make accommodations to physical space so that they can readily participate. The use of computers with on-line courses might reduce possible procedural barriers to education. By allowing an individual access to course materials and assignments through a modem, reasonable accommodation of persons with disabilities to educational opportunities could be achieved.

Employment-Related Characteristics

Often it is expected that opportunities for employment will not exist for those who are the most severely disabled. However, when the type of post-injury employment was considered, this stereotype was dispelled. Opportunities for employment do exist and a large proportion of persons with quadriplegia and those who use a wheelchair for mobility were represented in professional jobs.

Given this positive and encouraging finding, hospital personnel and vocational rehabilitation workers must offer hope to the persons with severe disabilities to prevent them from living this stereotype. Far too often have I heard a physician inform a severely injured patient during a clinical conference that he will not work again. Instead of instilling this attitude early on in the rehabilitation process, medical and vocational personnel could provide examples of those who have successfully returned to work. By focusing on others who have made a drastic shift in occupations, for example from being a farm hand to being a counsellor, the person with a severe spinal cord injury may begin to consider the possibility of employment.

With the results of this study identifying that professional-type jobs are an option for persons with severe injuries, attention could be directed to the preparatory elements required to pursue professional work. Clinicians and vocational counsellors must therefore be prepared to offer pertinent job-readiness information to persons with severe spinal cord injuries so that they may begin the transition into new areas in the work force. With advanced levels of education almost a given for advancement into the professional ranks, upgrading may need to be considered. Further difficulties may arise however, in the struggles that persons with spinal cord injuries may face in accessing and completing the education they require. Reasonable accommodation for persons with spinal cord injuries would be required in educational institutions so that equal opportunities would exist.

Factors that Influence the Employment Experience

Availability of project-funded positions.

The availability of project-funded positions may offer the opportunity to decrease unemployment rates among persons with spinal cord injuries. Project-funded positions seem to offer access to employment opportunities where they previously did not exist. Project positions also offer an environment for skill development and confidence building. In order to facilitate access to such positions, and ultimately employment, government funding must be made available to employers, and potential employees must

be aware of this employment option.

While such options for employment appear to be beneficial to persons with disabilities, it is important to note that those who enter into such an employment agreement must be treated fairly and not merely "used" as free labour. In essence, the employer must be responsible when accessing these programs. Employers could further demonstrate their commitment to offering equal employment opportunities by selecting the most qualified candidates regardless of disability. They could do so without financial incentives from the government or being motivated by the need to fulfil employment equity quotas.

Ensuring reasonable accommodation.

Based on the responses of the participants, it appears as though insufficient reasonable accommodation of persons with spinal cord injuries is offered by employers. Architectural barriers continue to exist. These barriers were evident as a significant proportion of the respondents reported that they did not have access to the aids and modifications that they require in the workplace. According to Roessler and Rumrill (1995), these barriers may increase the likelihood of job mastery problems. Furthermore, job mastery difficulties appear to reduce job satisfaction. When variables that affect work satisfaction were controlled, type of disability contributed the most to level of satisfaction. For persons with more severe injuries, job satisfaction was lower. This finding is consistent with Roessler and Rumrill's (1995) findings in that persons with more severe injuries probably encounter job mastery problems which translate into lower levels of job satisfaction.

An apparent lack of reasonable accommodation was also evident in the discrepancy between the number of persons who require a flexible work schedule to manage personal care routines and those who in fact work flexible hours. As noted by Daniels (1981), this type of procedural barrier may be more difficult to change than physical or attitudinal barriers because it requires the alteration of a system and not only a situation or individual.

While it appears as though accessibility and work site accommodation have improved over the years, the results indicate that insufficient adaptations to bring persons with disabilities on par with others in a competitive labour market have been made. Because necessary aids and modifications are not readily available for persons with disabilities, they are initially disadvantaged in entering the labour market. If they are fortunate enough to penetrate these physical barriers, they may also face the procedural barrier of a rigid work schedule. In order to overcome the architectural barriers, persons with disabilities and vocational counsellors must continue to advocate for work sites that are accessible to all persons regardless of disability. Changing procedural barriers is recognizably more difficult but may be possible by offering sensitivity-awareness training and informing employers about the benefits of hiring persons with disabilities.

Changing attitudes.

As stated earlier, the participants in this study perceive that employers lack a willingness to hire persons with disabilities and that discriminatory practices exist amongst employers. If the perceptions of the respondents are correct, and they might be given the high unemployment rates, the integration difficulties of persons with disabilities exceed the physical barriers that prevent access to employment (Berry, & Meyer, 1995). Attitudes related to interacting with persons with disabilities need to be changed. Educating employers about the capabilities and benefits of hiring persons with disabilities might facilitate this change. Berry and Meyer (1995) also suggest that having a person with a disability deliver training, where groups of employees/employers role play situations that they might encounter with a person with a disability, will help to reduce anxiety and in turn alter attitudes.

If the perceptions of participants related to employers' willingness to hire persons with disabilities are incorrect, then counsellors must focus their attention on persons with disabilities. As stated by Vargo (1992), "individuals with disabilities harbour many of the same myths and stereotypes about disability as everyone else because they are exposed to the same purveyors of attitudes" (p.82). Consequently, they may believe that

employers are discriminatory toward persons with disabilities because of old behavioral patterns that may or may not exist. In essence, they may be perpetuating the very stereotypes that they are trying to dispel. Vocational workers can employ the cognitive counselling strategies outlined earlier in this thesis (and described in detail by Vargo, 1992) in order to challenge persons who hold these possible misconceptions. Vocational counsellors could also educate potential employers on the benefits of hiring a person with a disability so that old patterns of discrimination may be changed.

Recommendations for vocational rehabilitation.

The results of the present study appear to suggest that the way in which vocational rehabilitation services are delivered must be reconsidered. Perhaps vocational services to persons with spinal cord injuries should involve the following components; 1) counselling in the area of cognitive skill development including exercises in problem-solving and decision-making, 2) guidance in effective coping mechanisms and the development of positive self-concept, and 3) career counselling, assessment and placement services. This would promote a more comprehensive service delivery system.

In order to implement comprehensive service delivery, the training needs of counsellors who currently provide this service would need to be examined. Kelley (1993) examined the perceptions of professionals working in human service programs serving consumers with severe disabilities, regarding their training needs. Individuals who participated in this study included rehabilitation counsellors, vocational workers, and vocational resource educators. The participants completed a questionnaire titled "Training Needs in Vocational Evaluation and Work Adjustment for Community Integration." The answers to the questionnaire provided information on the individual's work setting, experience in rehabilitation, and perceptions of training needs. Interestingly, the results indicated that these rehabilitation professionals focused more on what type of training they did not want rather than on identifying training needs. Kelley (1993) hypothesized that these results indicated that rehabilitation counsellors are ambivalent or sceptical about training needs, perhaps because they are unclear about how

to implement services for consumers with special needs. If Kelley's findings were generalizable to vocational professionals in Alberta, training would require a foundation rooted in providing information about the needs of persons with spinal cord injuries. This might include an examination of the self-defeating thoughts that persons with acquired disabilities present and practicing strategies to minimize the impact of these misconceptions. In essence, training would survey the attitudes and beliefs related to the abilities of persons with acquired disabilities.

Continuing education would also need to focus on how successful vocational outcomes can be achieved in spite of the many barriers that exist. The results of this study appear to demonstrate that persons with spinal cord injuries may be unable to return to their former occupations, and that advanced skill development may be required to compete in today's labour market. Therefore, counsellors must support the training needs of their clients with disabilities in order to achieve positive employment outcomes.

Once vocational counsellors are adequately prepared to offer comprehensive service delivery to clients who are re-entering the work force, they must advocate for positioning of persons with disabilities in the labour market. First, vocational counsellors must be prepared to educate potential employers and coworkers about the needs and abilities of persons with disabilities. Ultimately this would spur potential employment opportunities. Second, physical barriers would need to be overcome. Perhaps by amalgamating governing bodies that provide funding for building modifications with vocational services for persons with disabilities, counsellors who locate employment could ensure that necessary modifications are made. By restructuring existing services in this way, potential employers would work collaboratively with vocational service agencies. Furthermore, clients and counsellors would be more accountable for employment outcomes.

From my perspective as a vocational rehabilitation counsellor, a person with a spinal cord injury might ask what he/she can expect in terms of re-entry to employment experience. While it is difficult to generalize possible outcomes and experiences of the re-entry process, the following are possible scenarios that clients might experience, based

on the results of the present study. Cautiously providing this information to clients who are re-entering the employment arena may better prepare them for the many challenges that they might encounter. The scenarios were constructed by selecting potential client characteristics and possible outcomes based on the present study.

Table 26

Possible Scenarios for the Re-entry Process

Scenario 1: George sustained an injury to the T8 vertebrae and as a result relies on a manual wheelchair for mobility. At the time of injury George was working as a concrete batcher, a labour intensive position. He had completed some courses towards a college diploma and has not upgraded since his injury.

Possible Outcome

Required Education	Expected Employment Status	Expected Type of Work	Expected Employment Income
George chose not to upgrade his education level.	Unemployed.	Options limited due to the inability to return to physical labour and lack of desire to upgrade employment skills.	$0.0

Scenario 2: Samuel sustained a C6-C7 complete injury and uses a power wheelchair for mobility. He was a student at the time of injury but had not yet completed his undergraduate degree.

Possible Outcome

Required Education	Expected Employment Status	Expected Type of Work	Expected Employment Income
Although Samuel returned to University to complete his degree, he transferred from forestry to architecture. He made this change because he thought he would be less impaired by his physical limitations in the field of architecture.	Employed or unemployed. This is a function of available opportunities in the employment arena. Given education and motivation, Samuel has a greater likelihood of obtaining work.	Architect.	$30,001 and up.

Scenario 3: Jennifer sustained an incomplete quadriplegic injury and is able to walk unassisted. She does however, experience difficulties with bowel and bladder control, and can not sit for long periods of time. Just prior to her motor vehicle accident Jennifer had completed a secretarial sciences diploma and was looking for work.

Possible Outcome

Required Education	Expected Employment Status	Expected Type of Work	Expected Employment Income
Jennifer pursued upgrading but did not complete the first semester because she was having difficulty with the length of time required to sit through classes.	Unemployed or employed depending on whether or not an employer would accommodate Jennifer's need to periodically walk around while on the job.	None, Secretarial or Clerical.	$0.0 - $30,000.00

Vocational rehabilitation professionals might achieve greater success in their work by arranging for peers with disabilities to offer advice to the unemployed. More importantly, they must listen to what their clients have to say. Support for the hypothesis that vocational counsellors must genuinely consider information presented to them by their clientele is apparent among the responses to the following question: "What advice would you give a counsellor who is assisting a person with a spinal cord injury in his/her

return to work?"

Two themes were derived from the responses of the participants; employment preparation and attitude. Under the theme of employment preparation, the participants indicated that assessing interests and skills would be an important role for the vocational rehabilitation counsellor to take with persons re-entering the work force. For example, one respondent wrote "assess interests and current qualifications. Is further education required first? Assist in developing a good resume (don't state that you are disabled on the resume)". The respondents also stressed that counsellors who are assisting persons with spinal cord injuries in the return to work process must demonstrate understanding for the person's situation. This included giving encouragement, assisting the individual in understanding their limitations, and being non-judgemental. The following examples constitute the advice that could be given to a counsellor who is assisting a person with a spinal cord injury in their return to work.

Giving encouragement:

- "make sure that employer and coworker are aware of what they are dealing with. I do not support preferential treatment but reasonable expectations and safety."
- "give them positive encouragement."

Understanding limitations:

-"Listen to them carefully, help them understand their limitations but don't allow them to use them as an excuse not to return to work."

Being non-judgemental:

- "don't force their attitudes on the client. Let them make their own decisions. Not all spinal cord injured can be social workers, computer experts, etc."

Given the information that persons with spinal cord injuries may share, the vocational counsellor might be in a better position to provide more individualized service.

Finally, mechanisms must be put into place to inform persons with disabilities about the possible benefits of using vocational rehabilitation services. As indicated

earlier in this thesis, slightly more of the participants who had used vocational services were employed and earned mid-range employment income. Even though those who were in the highest income brackets did not readily use vocational services, their employment income might be better explained by their age and not in the use of vocational services. On the other hand, individuals have a better chance of obtaining employment if in fact they used vocational services. Therefore, securing employment in the first place will allow time for individuals to develop skills and seniority in their work which will ultimately lead to higher income levels.

Considerations for Future Research

In order to increase the generalizability of the research, it is necessary to initially conduct this study across Canada. This would be beneficial in identifying regional differences (such as differences in job opportunities, rates of pay, unemployment rates, equity programs and social programs) in the findings as well as to increase the external validity of the data. The information obtained from such a study would also provide information for comparison with employment rates of persons with spinal cord injuries in other countries.

The generalizability of the study could also be improved by expanding the sample to include persons with a range of physical disabilities not only those with spinal cord injuries. The information obtained from this group would allow the researcher to make comparisons across disability groups in areas such as unemployment rates, barriers to employment and the characteristics of those who are employed. Therefore, the inferences presented in the present study could be further examined.

Given that the response rate in the present study was low, it would be helpful to examine the characteristics of the non-respondents. This could be done by analyzing the basic demographic information of the non-respondents which is kept on file by the Canadian Paraplegic Association. This would provide additional information on the representativeness of the current sample group and assist in identifying response biases. Comparisons could also be made between the two groups around employment and other

productive activities.

Another very important area for further investigation is looking at the degree of mobility impairment rather than only at the level of disability. More specifically, a focus on whether or not the participants use a wheelchair for mobility could expand our knowledge of the employment situation when functional limitations are considered for those with spinal cord injuries and across varying disability groups.

The present study considered new variables that have not been thoroughly investigated. It is therefore suggested that future research, with a larger sample, specifically address the impact of project-funded positions and a flexible work schedule on employment rates for persons with spinal cord injuries. Perhaps project-funded positions offer a place for persons with disabilities to realize their skills, build confidence, and create opportunities for long-term employment. If this was the case, persons with disabilities and their advocates could influence government to continue to fund these innovative training options. By offering sensitivity awareness training to employers indirect pressure could be placed on them to provide work schedules that are flexible. Ideally this would lead to the further accommodation of persons with spinal cord injuries. In essence, a closer examination of the existing systems and procedures of organizations may provide equal employment opportunities regardless of disability.

Further study in the structure and benefits of vocational rehabilitation services would also be helpful. First, it would be interesting to investigate why vocational rehabilitation was not a strong determinant to accessing employment after the onset of spinal cord injury for the participants. Future research might return to the participants of this study. They could be asked why vocational rehabilitation was not a key factor in their return to employment. Second, it would be helpful to examine the differences in how service agencies deliver vocational rehabilitation. By looking at the key components of service delivery and outcome measures across agencies, the benefits of specific forms of intervention could be documented. With a larger sample of persons with disabilities, the researcher might also reexamine the employment incomes of individuals who have used vocational services. The purpose of this investigation would

be to test the hypothesis that persons who use vocational services obtain jobs that pay more than those who do not use these services. Finally, an examination of the role of coping strategies and self-confidence in securing employment must be considered. This type of research could touch on two questions: 1) Do coping strategies influence the vocational rehabilitation process and re-entry into the labour force?, and 2) Are vocational services which include a combination of vocational guidance (career counselling, assessment, and placement), and psychosocial counselling (skill development in problem solving, teaching strategies for coping with physical disability, and confidence building) more likely to lead to employment outcomes?

The role of volunteer work in employment preparation could also be examined further in future research. In the present study, following the onset of spinal cord injury participants were more actively involved in volunteer work yet their employment rates decreased. Perhaps by examining the viability of volunteer work offering employment-related skills, volunteer work could be used as a catalyst to securing employment. Furthermore, it might be important to find out whether people are participating in make-shift volunteer activities for agencies who already support and understand the needs of persons with disabilities or whether they are involved in volunteer work in the public and private sectors.

Finally, a comparison study could be conducted to examine the differences in attitudes that persons with disabilities hold regarding the willingness of employers to hire employees with disabilities and the actual attitudes of the employers. The results of this study might inform us of whether or not employers harbour stereotypes about persons with disabilities and whether in some way persons with disabilities are inadvertently perpetuating these stereotypes.

Conclusion

In conclusion, the present study demonstrated that Albertans with spinal cord injuries are severely employment disadvantaged. They have higher rates of unemployment than the average Albertan, are paid significantly less, and have

considerable barriers to overcome in order to break into the labour force. However, with skill development, persistence and a positive attitude a greater degree of success is possible. For just a moment, consider Claude's story.

May 1995

How many people with spinal cord injuries have gotten an engineering degree and broken their neck twice? Yes, it's Claude. I guess I sound kind of negative in part of this survey, let me explain.

I graduated from the U of A in Spring of 1992. I looked for work until November. AISH had cut me off as soon as I graduated so I had very little income from November 1992 until May of 1993. I worked at the U of A under a government funded project which was set to end in June. I broke my neck again in May of 1993.

After my second rehabilitation program, I started looking for work again in February of 1994. From the time of graduation to the time I began work (excluding time where I recovered from the second injury) I sent out over 250 resumes. I also 1) checked out Agency X, Agency Y, and Agency Z weekly, 2) checked the paper daily, 3) attended career fairs, 4) made over 20 United Way presentations on behalf of Canadian Paraplegic Association as part of networking, and 5) did countless hours of volunteering through public speaking and committee work. I began work in March of 1995.

Basically my life was focused on finding a job. I got no support or help from Agency X. In fact they tried to get me into telemarketing, pyramid type sales and even banking. Agency Y (workplace supports) didn't offer much help. Agency Z helps only if there is government funding. I got the best help from Larry at CPA who wrote me a letter of reference and began mailing resumes out in bunches.

Prior to working for Shell Canada on contract, I was all set up to work for free at an Engineering company in town. I felt it was the only way to get experience. Besides, I was on AISH living in subsidized housing. Even if they would have paid me $6.00 an hour, I would have made the same money.

All in all, being unemployed sucks. I lost all self confidence. Like I say, it was because I stuck with it that I got something.

April 1996

Twelve months later, I'm an engineer on staff with Shell Canada.

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APPENDICES

APPENDIX A

January 8, 1995

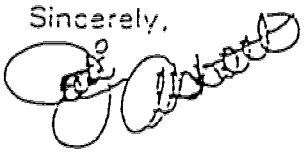
Ms. Jodi Abbott
10834 - 125 Street
Edmonton, Alberta
T5M 0L4

Mr. J. Karp
GF Strong Rehabilitation Centre
4255 Laurel Street
Vancouver, British Columbia
V5Z 2G9

Dear Mr. Karp:

Further to our telephone conversation of December 1, 1994, I am writing to confirm that you have given your permission for me to use portions and/or a modified version of your questionnaire from the Vocational/Avocational Outcome Study that you completed in November of 1989. I would like to thank you in advance for the opportunity to include some of your questions in my survey which will examine re-entry to employment following the onset of spinal cord injury. Upon completion of my dissertation I will provide you with an overview of the results of my study. Thank you again.

Sincerely,



Jodi L. Abbott, M. Ed.

ID#: _____

SPINAL CORD INJURY - WORK SURVEY

Purpose: The purpose of this survey is to gain information about the factors that have helped or prevented access to employment for persons who have spinal cord injuries.

Informed Consent: I agree to take part in the study Factors Influencing Employment Following Spinal Cord Injury as described in the enclosed letter. I understand the purpose of the study and am participating voluntarily. I am aware that I am free to withdraw at any time. I understand that my responses will be grouped with everyone else's so that mine will be unknown. I also understand that surveys will be destroyed after the results are analyzed. I give permission for this information to be used in the work that Ms. Abbott must do to complete her Doctor of Philosophy degree in Educational Psychology. The responses for all the surveys may also be used for writing scientific articles.

I have read the above statement and attached letter and agree to take part in this study under the conditions as described. By completing the survey I am giving consent to participate in the study.

Instructions: Listed on the following pages are questions that ask about workplace and personal circumstances that might influence access to employment. **Please read each question carefully and provide a written answer or circle the number next to the most appropriate answer.**

If you are having trouble completing this survey, please contact either myself, Jodi Abbott at 432-1137 or the Canadian Paraplegic Association representative in your area and they will help you.

CPA - Edmonton
Contact Person: Larry Pempeit
424 - 6312

CPA - Calgary
Contact Person: Randy Arndt
236 - 5060

CPA - Grande Prairie
Contact Person: Dale Williams
532 - 3305

CPA - Red Deer
Contact Person: Kim Gernack
341 - 5060

CPA - Lethbridge
Contact Person: Michelle Parrott
327 - 7577

CPA - Medicine Hat
Contact Person: Alex Schafer
529 - 8951

ID#:_____

STRICTLY CONFIDENTIAL

1. Age:_____

2. Gender:

Female	1
Male	2

3. Information related to your spinal cord injury:

a) Type of spinal cord injury

Quadriplegia Incomplete	1
Quadriplegia Complete	2
Paraplegia Incomplete	3
Paraplegia Complete	4

b) Level of injury:

C1-C4	1
C5-C8	2
T1-T6	3
T7-T12	4
L1-L5	5
S1-S5	6
Uncertain	7

c) At least 75% of the time I get around by...

Using a Power Wheelchair	1
Using a Manual Wheelchair	2
Using a Walker, Crutch(es), or Cane(s)	3
Walking	4

d) Do you need (or would you need) the following aids and modifications in the workplace?

i) Aids

	Yes	No
writing splint	1	2
mouth stick	1	2
computer (with modifications)	1	2
personal assistant	1	2
other (specify _____)	1	2

ii) Modifications

	Yes	No
wide doorways	1	2
hand rails	1	2
wheelchair access into the building	1	2
lever door handles	1	2
wheelchair accessible washroom	1	2
other (specify _____)	1	2

e) In what month and year were you injured? _____ _____
Month Year

4. Do you consider yourself to be an aboriginal person (i.e., status Indian, non-status Indian, Inuit, or Metis)?

Yes 1
No 2

5. Do you consider yourself to be a member of a visible minority (i.e., non-white in race or colour)?

Yes 1
No 2

6. Where were you living at the time of your injury?

In a rural community with a population of less than 1,000 1
In a town with a population of between 1,000 and 10,000 2
In a small city with a population of between 10,001 and 30,000 3
In a medium sized city with a population of between 30,001 and 99,999 4
In a large city with a population of greater than 100,000 5

7. Are you still living in the same community? Yes 1
No 2 **(If no, go to question 9)**

8. How important were the following reasons in your decision to stay living in the same community?

		Not At All Important				Very Important
a)	To be closer to family or my support system	1	2	3	4	5
b)	To get physical care assistance	1	2	3	4	5
c)	To get funding needed to cover care needs	1	2	3	4	5
d)	To live in an accessible environment	1	2	3	4	5
e)	To access continued education	1	2	3	4	5
f)	To access services for persons with disabilities (i.e., CPA, recreation programs)	1	2	3	4	5
g)	To access employment opportunities	1	2	3	4	5

		Yes	No
h)	Have you thought about moving?	1	2

(Skip to question 11)

9. Where are you living now?

In a rural community with a population of less than 1,000	1
In a town with a population of between 1,000 and 10,000	2
In a small city with a population of between 10,001 and 30,000	3
In a medium sized city with a population of between 30,001 and 99,999	4
In a large city with a population of greater than 100,000	5

10. How important were the following reasons in your decision to move?

		Not At All Important				Very Important
a)	To attend a medical/physical rehabilitation program	1	2	3	4	5
b)	To be closer to family or personal support system	1	2	3	4	5
c)	To get physical care assistance	1	2	3	4	5
d)	To get/maintain funding needed to cover care needs	1	2	3	4	5
e)	To live in an accessible environment	1	2	3	4	5
f)	To access continued education	1	2	3	4	5
g)	To access service to persons with disabilities (i.e, CPA, recreational programs)	1	2	3	4	5
h)	To access employment opportunities	1	2	3	4	5

11. In what type of residence are you currently living?

House	1
Apartment	2
Group Home	3
Institution	4
Other (specify _____)	5

12. Is your residence...

Rented	1
Owned (By you or someone you live with)	2
A Cooperative	3
Other (specify_____)	4

13. Are you living ...

a)	Alone	1	**(Go to question 14)**
	With family	2	**(Please answer question 13b)**
	With others	3	**(Please answer question 13c)**

b) If living with family, are you living with ...? (Check all that apply)

_____ parents
_____ siblings
_____ spouse/partner
_____ children
_____ non-immediate family

c) If living with others, are you living with ...? (Check all that apply)

_____ facility care-givers and/or residents
_____ attendant
_____ friends

14. Please indicate your marital status.

At Time of Injury		Now
1	Married	1
2	Single	2
3	Separated	3
4	Divorced	4
5	Common Law	5
6	Widowed	6

15. Have you moved into and/or out of a serious relationship since the onset of your injury?

Yes 1

No 2 **(If no, go to question 16)**

a) If yes, did your injury negatively affect your relationship?

Yes 1

No 2 **(If no, go to question 16)**

b) If yes, please explain.

16. Please indicate your level of education.

At Time Of Injury		No.
1	9th Grade or Less	1
2	Some High School	2
3	High School Graduation	3
4	Some Community College	4
5	Community College Graduation	5
6	Some Undergraduate University	6
7	University Bachelor's Degree	7
8	Some Post Graduate Study (ie; Beyond a Bachelor's Degree)	8
9	Post Graduate Degree	9

*** If there has been no change in your level of education since your injury, go to question 18.**

17. If you have increased your level of education since the onset of your injury how important were the following reasons for your return to school?

		Not At All Important				Very Important
a)	To prepare for a specific job/career	1	2	3	4	5
b)	For personal development	1	2	3	4	5
c)	Because I was unable to find a job	1	2	3	4	5
d)	To fill time; alleviate boredom	1	2	3	4	5
e)	Because I needed to change careers	1	2	3	4	5
f)	To advance further in my education	1	2	3	4	5
g)	To advance in my career	1	2	3	4	5
h)	Other (specify _____)	1	2	3	4	5

18. Think back to the time just **before your injury** and indicate your gross annual income (i.e., before taxes).

a) Income from paid employment...

$_____ Per year

b) Income from other sources...

$\_\_\_\_\_$ Per year

c) Did you receive income from...?		Yes	No
i)	Self	1	2
ii)	Spouse/partner	1	2
iii)	Parents	1	2
iv)	Inheritance	1	2
v)	Student loan	1	2
vi)	Pension	1	2
vii)	Investments	1	2
viii)	Social Assistance	1	2
ix)	Unemployment Insurance	1	2
x)	Other (specify $\_\_\_\_\_$)	1	2

19. Think back to the **six months before your injury** and estimate the <u>average number of hours per week</u> you spent in the following activities.

paid employment	$\_\_\_\_\_$	hours per week
volunteer work	$\_\_\_\_\_$	hours per week
child care (of own children)	$\_\_\_\_\_$	hours per week
housework (cooking, cleaning, etc)	$\_\_\_\_\_$	hours per week
attending classes and doing school work	$\_\_\_\_\_$	hours per week
leisure/recreation	$\_\_\_\_\_$	hours per week

20. Were you working in a paid job in the six months before your injury?

Yes 1

NO 2 **(If no, go to question 24)**

21. What kind of paid job did you have **in the 6 months before** your injury? (If you held more than one job describe your <u>main job</u>).

Job Title: $\_\_\_\_\_$

Duties: $\_\_\_\_\_$

$\_\_\_\_\_$

$\_\_\_\_\_$

22. How much do you agree or disagree that the following statements describe the job that you had in the six months before your injury?

		Strongly Disagree				Strongly Agree
a)	The job involved manual labour	1	2	3	4	5
b)	The job was related to my education/training	1	2	3	4	5
c)	The pay was good	1	2	3	4	5
d)	My chances for promotion were good	1	2	3	4	5
e)	The benefits were good	1	2	3	4	5
f)	The work was interesting	1	2	3	4	5
g)	It was the kind of job I expected to have at that stage of my life	1	2	3	4	5
h)	The job was secure	1	2	3	4	5

23. How satisfied were you with the job you had in the six months before your injury?

Very Unsatisfied				Very Satisfied
1	2	3	4	5

Please explain what it was that made you satisfied or dissatisfied.

_____

_____

_____

_____

_____

24. Thinking of the present, what is your **current** gross annual income (i.e., before taxes)...?

a) Annual income due to your disability (i.e; pensions, subsidies, etc)...

$ _____ Per Year

b) Income from paid employment...

$ _____ Per Year

c) Income from other sources...

$ _____ Per Year

d) Do you receive income from ...?		Yes	No
i)	Self	1	2
ii)	Social Assistance	1	2
iii)	Spouse/partner	1	2
iv)	Parents	1	2
v)	Inheritance	1	2
vi)	Educational Scholarship	1	2
vii)	Pension	1	2
viii)	Vocational Rehabilitation Services for Persons with Disabilities (VRDP)	1	2
ix)	Settlement Funds	1	2
x)	Assured Income For the Severely Handicapped	1	2
xi)	Unemployment Insurance	1	2
xii)	Short or Long Term Disability (STD/LTD)	1	2
xiii)	Workers Compensation Board (WCB)	1	2
xiv)	Crimes Compensation	1	2
xv)	Other (specify _____)	1	2

25. Have you ever held a job since the onset of your spinal cord injury?

Yes	1
No	2 **(If no, go to question 31)**

26. How many jobs have you held since the onset of your spinal cord injury? _____ jobs.

27. Since the onset of your injury, have you ever been employed in a position that was project funded (i.e., Canada Job Strategies or another outside funding source)?

Yes	1
No	2 **(If no, go to question 28)**
Uncertain	3 **(If uncertain, go to question 28)**

a) If yes, how many of the jobs you have had were based on project funding? _____ jobs

b) If yes, how many of these jobs served as a stepping stone to further employment? _____ jobs

28. On how many occasions since the onset of your injury, have you been employed in a contract position (where the position continued for a specified period of time)? _____times

29. Have there ever been any other workers with disabilities in your place of employment?

Yes	1
No	2
Uncertain	3

30. a) Are you currently working in a paid job?

Yes	1
No	2

b) Are you currently looking for work?

Yes	1
No	2

31. What advice would you give an employer who is considering hiring a person with a disability?

_____

_____

_____

_____

_____

32. What advice would you give another person with a spinal cord injury who is thinking of returning to work?

_____

_____

_____

_____

_____

33. What advice would you give coworkers who might work with a fellow employee who has a spinal cord injury?

34. What advice would you give a counselor who is assisting a person with a spinal cord injury in their return to work?

35. Now think of how you spent your time **over the past six months** (or since the onset of your injury if injured in the last six months). Estimate the average number of hours per week for each activity.

paid employment	_____	hours per week
volunteer work	_____	hours per week
child care (of own children)	_____	hours per week
housework (cooking, cleaning, etc)	_____	hours per week
attending classes and doing school work	_____	hours per week
leisure/recreation	_____	hours per week

** If you have NOT held a job at any time in the last six months go to question 42.

36. Please describe your current (or most recent in the last six months) paid job. (Please describe your main job if you hold/held more than one job).

Job Title _____

Duties: _____

_____

_____

_____

_____

a) Is this job...? Full time (30 hours/week or more) 1
Part time (less than 30 hours/week) 2

b) Is this job ...? Permanent 1
Temporary 2

c) Do you work ...?

	Yes	No
Regular hours	1	2
Shift work	1	2
Flex time	1	2

37. How important were each of the following in getting your current (most recent) job?

		Not At All Important				Very Important
a)	Specific employment skills	1	2	3	4	5
b)	Previous work experience	1	2	3	4	5
c)	Level of education	1	2	3	4	5
d)	A combination of education and experience	1	2	3	4	5
e)	Disability (i.e., quotas for hiring designated groups)	1	2	3	4	5
f)	Gender	1	2	3	4	5
g)	Your contacts (family, friends, etc)	1	2	3	4	5
h)	Other (please specify) _____	1	2	3	4	5

i) Which of the above was the most important in getting your current (most recent) job?

_____

38. How much do you agree or disagree that the following statements describe your current (or most recent) job?

		Strongly Disagree				Strongly Agree
a)	The job involves mostly office work	1	2	3	4	5
b)	The job is related to my education/training	1	2	3	4	5
c)	The pay is good	1	2	3	4	5
d)	My chances for promotion are good	1	2	3	4	5
e)	The benefits are good	1	2	3	4	5
f)	The work is interesting	1	2	3	4	5
g)	It is the kind of job I expected to have at this stage of my life	1	2	3	4	5
h)	The job is secure	1	2	3	4	5

39. How satisfied are you in your current job (or were you in your most recent job)?

Very Unsatisfied				Very Satisfied
1	2	3	4	5

40. How much are the following disability - related benefits actually reduced because you hold a job?

		Not Applicable	Not At All Reduced				Completely Removed
a)	Income benefits (i.e., pensions, insurance claims)	0	1	2	3	4	5
b)	Medical benefits (i.e., medication, supplies)	0	1	2	3	4	5
c)	Homecare benefits (i.e., attendant care)	0	1	2	3	4	5

41. In your current (or most recent) place of employment do/did you have access to the following aids and modifications?

	Yes	No
a) Aids		
writing splint	1	2
mouth stick	1	2
computer (with modifications)	1	2
personal assistant	1	2
other (specify _____)	1	2
b) Modifications		
wide doorways	1	2
hand rails	1	2
wheelchair access into the building	1	2
lever door handles	1	2
wheelchair accessible washroom	1	2
other (specify _____)	1	2

c) Given your disability, how adequate are the above aids and modifications for your needs ?

Totally Inadequate				Totally Adequate
1	2	3	4	5

d) To the best of your knowledge, what was the estimated cost to install the above aids/modifications in your workplace? (Leave the answer blank if you are uncertain).

Aids $_____ Modifications $ _____

e) To the best of your knowledge, who covered the greatest portion of the costs of these aids/ modifications?

Self	1
Employer	2
Government funding which applies to you as a person with a disability (Motor Vehicle Accident Claims Fund, Workers Compensation Board, etc)	3
Government funding that applies to the employer	4
Another funding source (specify) _____	5
Uncertain	6

42. There are several agencies in Alberta that provide *vocational assessments, **career counselling, and ***placement to persons with disabilities. Such services are available through the Canadian Paraplegic Association, Employabilities, YMCA, The Career Development Centre and Vocational Rehabilitation for Disabled Persons.

** Vocational assessment includes gathering information on the type of work an individual may have done in the past, completing interest and aptitude inventories, and examining what an individual might do in the future.*

*** Career counselling includes guiding a person into an appropriate field of employment, providing job referrals and assisting with resume preparation.*

**** Placement refers to assisting a person in being placed into a temporary or permanent job.*

a) Given your experience, how easy is it to access these services?

Difficult				Very Easy
1	2	3	4	5

b) How likely are you to use these services?

Very Unlikely				Very Likely
1	2	3	4	5

c) How useful to you is vocational rehabilitation in finding paid employment?

Not At All Useful				Very Useful
1	2	3	4	5

d) Have you ever used these services?

Yes 1

No 2 **(If no, go to question 46)**

If yes, please list the agencies that you have had contact with. _____

_____

_____

_____

43. Since your injury, have you had any experience with...

Vocational Assessment - *includes the gathering of information on the type of work an individual may have done in the past, completing interest and aptitude inventories, and examining what an individual might do in the future.*

Yes 1

No 2 **(If no, go to question 44)**

a) Approximate number of hours of service received since the onset of your injury _____

b) How would you rate the quality of service you have received?

Poor				Excellent
1	2	3	4	5

Please explain why you have rated vocational assessment services in this way.

_____

_____

_____

44. Since your injury, have you had any experience with...

Career Counselling - *includes guiding a person into an appropriate field of employment, providing job referrals and assisting with resume preparation.*

Yes 1

No 2 **(If no, go to question 45)**

a) Approximate number of hours of service received since the onset of injury _____

b) How would you rate the quality of service you received?

Poor				Excellent
1	2	3	4	5

Please explain why you rated career counselling services in this way.

_____

_____

_____

45. Since your injury, have you had experience with...

Placement - *includes assisting a person in being placed into a temporary or permanent job.*

Yes 1

No 2 **(If no, go to question 46)**

a) Approximate number of hours of service received since the onset of injury _____

b) How would you rate the quality of service you received?

Poor			Excellent
1	2	3	4

Please explain why you rated placement services in this way.

_____

_____

_____

**** If you have never been given help in searching for or returning to work skip to question 47.**

46. Who has helped you the most in searching for and/or returning to work ?

_____

_____

_____

Please explain how they helped you search for a job and/or return to work.

_____

_____

_____

47. How much do you agree or disagree that:

Having a paid job is very important to me.

	Strongly Disagree				Strongly Agree
	1	2	3	4	5

48. How willing are you to hold a job if the following benefits are reduced as a result of earnings from that job?

		Very Unwilling				Very Willing
a)	Income benefits (i.e., pensions, insurance claims)	1	2	3	4	5
b)	Medical benefits (i.e., medication, supplies)	1	2	3	4	5
c)	Homecare benefits (i.e., attendant care, homemaking assistance)	1	2	3	4	5

49. How important is it for you to have a flexible work schedule?

Not At All Important	1	(If circled, go to question 51)
	2	(If circled, go to question 51)
	3	
	4	
Very Important	5	

50. How important are the following reasons for you to have a flexible work schedule?

		Not At All Important				Very Important
a)	To manage care needs (when done by oneself)	1	2	3	4	5
b)	To manage care needs (when assistance is needed)	1	2	3	4	5
c)	To deal with unexpected personal care needs (i.e., bowel and bladder accidents)	1	2	3	4	5
d)	To ensure family time	1	2	3	4	5
e)	To deal with child care needs	1	2	3	4	5
f)	To allow for regular medical appointments related to your spinal cord injury	1	2	3	4	5
g)	To allow for the development of stamina (i.e., extended of time in a wheelchair may be exhausting)	1	2	3	4	5
h)	To allow time to get work done in order to maintain job performance	1	2	3	4	5

51. How important is it (would it be) for you to have coworkers in the workplace who also have physical disabilities?

Not At All Important				Very Important
1	2	3	4	5

Finally, how much do you agree or disagree that:

52. Employers are biased against people with a spinal cord injury.

Strongly Disagree				Strongly Agree
1	2	3	4	5

53. Most employers discriminate against persons with physical disabilities.

Strongly Disagree				Strongly Agree
1	2	3	4	5

54. Most employers are willing to hire someone with a physical disability.

Strongly Disagree				Strongly Agree
1	2	3	4	5

55. Most workers welcome persons with disabilities into the workplace.

Strongly Disagree				Strongly Agree
1	2	3	4	5

THANK YOU AGAIN FOR ANSWERING THE QUESTIONS IN THE SURVEY.

PLEASE PUT THE SURVEY IN THE POSTAGE-PAID ENVELOPE AND MAIL IT AS SOON AS POSSIBLE.

This letter is to confirm that Larry Pempeit, Director of Rehabilitation Service of the Canadian Paraplegic Association - Alberta has authorized Jodi Abbott to utilize the membership list of the Association for the purposes of conducting her doctoral research. Ms. Abbott is aware that the member list is to be used only for the purposes of conducting this research project. A random sample will be drawn from the list and the entire list will be returned to the Canadian Paraplegic Association upon completion of the sampling and follow up process.

Jodi Abbott
Doctoral Student, University of Alberta (Department of Educational Psychology)

Larry Pempeit
Director of Rehabilitation Service, Canadian Paraplegic Association - Alberta

APPENDIX D

EMPLOYMENT FOLLOWING SPINAL CORD INJURY

In the coming months you may receive a survey in the mail on employment following the onset of spinal cord injury. With the support of the Canadian Paraplegic Association (Alberta), Jodi Abbott is distributing a survey that will examine the employment status of persons with spinal cord injuries in the Province of Alberta. In addition to providing information on employment status, the survey will gather information on the possible need for vocational rehabilitation services as well as potential disincentives that may prevent persons with spinal cord injuries from working. Whether or not you are employed, you are encouraged to participate in this study.

Jodi Abbott is a former employee of the Canadian Paraplegic Association. She has a Masters Degree in Educational Psychology and is currently completing her PhD. Her academic and career interests are in vocational rehabilitation and her study will contribute to the knowledge base in this field.

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Honorary National Chairperson
Rick Hansen

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The Alberta Paraplegic Foundation

50 YEARS
OPENING DOORS

A United Way Member Agency

Jodi Abbott
c/o Canadian Paraplegic Association - Alberta
305, 11010 - 101 Street
Edmonton, Alberta
T5H 4B8

Dear Member of the Canadian Paraplegic Association:

This survey, which will take you about 45 minutes to complete, is part of a research project I am doing to look at the factors that influence employment following spinal cord injury. As a person whose employment status may have changed as a result of injury, your response is important. Members of the Canadian Paraplegic Association (Alberta), who have a spinal cord injury, have been sent this survey.

The answers to the survey will be kept in confidence. The information will only be seen by those people who will gather the data. You will notice that there is a number on the top right hand corner of your survey. This number is coded to your name so that a research assistant can contact you if you need a reminder to complete the survey. Once the survey has been returned, this number will be removed so that there will be no way to know who answered the survey. All returned surveys will be kept in a locked file.

I encourage you to read the instructions for the survey carefully before you complete the questions. If you need help in marking your answers please feel free to ask a family member, helper, a representative of C.P.A., or a friend to assist you. Because the study is looking at employment experiences for persons with spinal cord injuries, your input is very important to me. It is, however, your option to participate or not participate in this study.

When you have finished the survey, please place it in the postage paid envelop and mail it to me as soon as possible. In exchange for your time, I have enclosed an entry form for a draw for an Esquire watch. Return it with your survey -- perhaps you will win!

Kind regards,

Jodi Abbott
Doctoral Student, University of Alberta (Department of Educational Psychology)

P.S. Your support of this project is very important to C.P.A. It will be used to develop future employment programs and help lobby for policy change.

Larry Pempeit
Director of Rehabilitation Service