

**EFFECTS OF A LEISURE EDUCATION PROGRAM
ON ADJUSTMENT TO DISABILITY
OF PERSONS WITH SPINAL CORD INJURY**

BY

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in Partial Fulfillment of the Requirements
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of Persons with Spinal Cord Injury**

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Audrey M. McIlraith

**A Thesis/Practicum submitted to the Faculty of Graduate Studies of The University
of Manitoba in partial fulfillment of the requirements of the degree
of
Master of Science**

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TABLE OF CONTENTS

	Page
ABSTRACT.....	vi
ACKNOWLEDGEMENTS	viii
LIST OF FIGURES	x
LIST OF TABLES.....	xi
1. INTRODUCTION.....	1
1.0 Statement of the Problem	7
1.1 Hypotheses	8
1.2 Assumptions	8
1.3 Delimitations	8
1.4 Limitations.....	9
1.5 Definition of Terms	10
2. REVIEW OF LITERATURE.....	12
2.0 Defining Adjustment to Disability	12
2.1 Measuring Adjustment to Disability	14
2.1.0 Measurement Issues.....	16
2.2 Factors Studied in Adjustment to Disability	20
2.2.0 Time Since Injury	20
2.2.1 Level of Injury and Severity of Disability.....	24
2.2.2 Age and Age at Onset of Injury.....	26

2.2.3	Pain.....	27
2.2.4	Other Demographic Variables.....	27
2.2.5	Personality	29
2.2.6	Environmental Factors	29
2.2.7	Social Support	30
2.3	Perceived Control	33
2.4	Psychological Indicators of Adjustment to Disability.....	35
2.4.0	Life Satisfaction	35
2.4.0.0	Life Satisfaction and Perceived Control.....	37
2.4.1	Depression	37
2.4.1.0	Misconceptions About Post-SCI Depression	39
2.4.1.0.0	Staff attitudes and depression.....	39
2.4.1.0.1	Stage theories and depression.	40
2.4.1.1	Depression and Perceived Control	41
2.5	Leisure and Adjustment to Disability.....	42
2.5.0	Leisure and Perceived Control	43
2.5.0.0	Perceived Control and Perceived Leisure Control	44
2.5.1	Leisure and Life Satisfaction.....	46
2.5.1.0	Life Satisfaction and Leisure Satisfaction.....	47
2.5.2	Leisure and Depression	49
2.6	Leisure Education.....	51

2.6.0	Leisure Education and Persons with Physical Disabilities.....	53
2.6.1	Leisure Education and Outcomes related to Psychological Well-being	58
2.6.2	Leisure Education and Adjustment to Disability	63
2.6.2.0	How Leisure Education Can Effect Perceived Control and Perceived Leisure Control	65
2.6.2.1	How Leisure Education Can Effect Leisure Satisfaction and Life Satisfaction.....	67
2.6.2.2	How Leisure Education Can Effect Depression.....	68
2.6.2.3	How Leisure Education Can Facilitate Community Reintegration	69
2.6.2.4	Timing of Leisure Education in SCI Rehabilitation.....	70
2.7	Summary	72
3.	METHOD.....	73
3.0	Participants	73
3.1	Design.....	74
3.2	Leisure Education Intervention	77
3.3	Procedure.....	83
3.4	Instrumentation.....	88
3.5	Analysis.....	94
4.	RESULTS.....	95
4.0	Correlational Analysis.....	99
4.1	Social Validity Questionnaire	101

4.2	Field Notes	107
4.3	Helps and Hindrances in Adjustment to Disability	113
4.3.0	Helpful Factors in Adjustment to Disability	113
4.3.1	Hindrances in Adjustment to Disability	114
5.	DISCUSSION	117
5.0	Pearson Correlations.....	121
5.1	Social Validity Questionnaire	123
5.2	Field Notes	128
5.3	Factors that Help and Hinder Adjustment to Disability	133
5.4	Summary and Recommendations	136
	REFERENCES	141
	APPENDICES	156
A	Initial Telephone Contact Protocol.....	156
B	Informed Consent Form	158
C	Test Battery	163
C1	Life Satisfaction Scale.....	164
C2	Perceived Control Scale	166
C3	Center for Epidemiological Studies - Depression Scale.....	167
C4	Perceived Leisure Control Scale	168
C5	Leisure Satisfaction Scale.....	170
D	Leisure Education Program	172
E	Social Validity Questionnaire	183
F	Telephone Contact Protocol for Social Validity Questionnaire	185
G	Participant Profile.....	187
H	Pre- and Post-test Battery Protocol	190
I	CRP Participant Guide	194

ABSTRACT

The purpose of this study was to determine the effects of a leisure education program on life satisfaction, depression, perceived control, perceived leisure control, and leisure satisfaction among adults who had sustained spinal cord injury (SCI) within the previous 7 years and were living in the community. Thirty participants were matched on both gender and age at onset and then randomly assigned to experimental and control group conditions. After attrition, there were 12 experimental and 13 control group participants. The experimental group received a leisure education program which occurred an average of one and one third hours every week and a half over an average 7.5 weeks plus 4 weeks of fading. Both groups were administered a test battery before and after the program to assess the impact of the leisure education program on the five dependent variables. Results of ANCOVA indicated the leisure education program did not have a statistically significant effect on the five adjustment measures. The hypotheses, therefore, were rejected. Pearson correlations indicated that life satisfaction, leisure satisfaction, perceived control and perceived leisure control were positively correlated with each other and that depression was negatively correlated with them. Independent samples t-tests conducted on demographic variables showed no significant differences between the control and experimental groups, indicating the groups were similar. Social validity results suggested the leisure education had a positive impact on leisure satisfaction of experimental group participants, and identified barriers that hindered leisure participation. Field notes also highlighted leisure barriers, and supported the person-centred, non-

directional model of leisure education. Pre-test findings on independent samples t-tests, ANOVA, and Pearson correlations indicated that gender was a significant factor in depression and perceived control, that time since injury was a factor in leisure satisfaction, and that level of injury was a significant factor in depression. Participants' comments highlighted both environmental and personal factors that helped and hindered adjustment to disability, suggesting that leisure education interventions may be limited to influencing personal factors related to adjustment to disability of persons with SCI.

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LIST OF FIGURES

	Page
Figure 4.1 - Main effects for life satisfaction by group	96
Figure 4.2 - Main effects for depression by group.....	97
Figure 4.3 - Main effects for leisure satisfaction by group.....	97
Figure 4.4 - Main effects for perceived control by group	98
Figure 4.5 - Main effects for perceived leisure control by group	98
Figure 5.1 - Factors that contribute to leisure satisfaction.....	124

LIST OF TABLES

	Page
Table 3.1 - Comparison of Key Characteristics of Participants for Experimental and Control Groups.....	75
Table 4.1 - Summary of Means and Standard Deviations of the Dependent Measures for Experimental and Control Groups	96
Table 4.2 - Comparison of Pre- and Post-test Correlation Coefficients Among Five Measures relating to Adjustment to Disability	100
Table 4.3 - Percentage of Participant Responses for the Likert-type Scale Of the Social Validity Questionnaire.....	102

INTRODUCTION

Spinal cord injury (SCI) results from trauma or disease of the spinal cord and has been recognized as one of the most devastating conditions in life (Guttman, 1976). Although few people survived SCI before World War II (Guttman, 1976; Krause, 1992b), dramatic improvements in the treatment of SCI have led to longer life expectancies (Krause & Crewe, 1991; Lundqvist, Siosteen, Blomstrand, Lind & Sullivan, 1991; Noreau & Shephard, 1995). Today, approximately 32 of every 50 injured persons survive for 24 hours or longer (Trieschmann, 1988), but these survivors usually live with some degree of permanent paralysis (i.e., incomplete or complete paralysis) that, depending on the level of the spinal cord lesion, most often results in either quadriplegia or paraplegia. The incidence of SCI has risen in North America over the past 3 decades (Noreau & Shephard, 1995) and has reached 5 per 100 000 population in the 1980's (Trieschmann, 1988). Noreau and Shephard state that prevalence is higher in young people (16 to 30 years) with 65% of injuries due to motor vehicle accidents and 15% due to sports injuries. They add that sport accidents usually lead to quadriplegia and industrial accidents more often result in paraplegia than quadriplegia. In Manitoba, there are approximately 33 new SCI per year and, like North American statistics, prevalence is highest (42%) in younger people (16-30 years) who commonly are male (76%), and most injuries (about 44%) are due to motor vehicle accidents. In Manitoba, 56% of SCI occur in the cervical region which result in quadriplegia, whereas 44% of injuries occur at lower levels which result in paraplegia (Manitoba Neurotrauma Initiative, 1996/97).

Although hopes of finding a 'cure' for SCI are surfacing as a result of recent advances in research, SCI continues to be recognised as an incurable condition for which the only treatment is to rehabilitate. Consequently, SCI results in lifestyle changes (Bozzacco, 1990) and requires adjustment in all aspects of life (Lee, Brock, Dattilo, & Kleiber, 1993). In particular, SCI results in major physiological disruptions (e.g., mobility and sensation losses, bowel and bladder dysfunctions, impaired sexual function) which often lead to psychological stresses (e.g., threat to self-concept, social position and roles, job, love relationships) (Buckelew, Frank, Elliott, Chaney, & Hewett, 1991; Decker & Schulz, 1985; Dew, Lynch, Ernst, & Rosenthal, 1983). These traumatic life changes pose tremendous physical and psychological adjustment demands.

Unfortunately, the field of SCI rehabilitation has not paid equal attention to physical and psychosocial adjustment. During the early years of SCI rehabilitation (after World War II), physical restoration was the primary rehabilitation focus (Woodrich & Patterson, 1983). In more recent years, physical functioning has continued to be "a primary concern of those in rehabilitation and ...a central quality of life issue for those with SCI" (Caldwell, Dattilo, Kleiber, & Lee, 1994/95), but there also is recognition that the predominant problems following SCI are often psychological (Noreau & Shephard, 1995) or psychosocial in nature (Woodrich & Patterson, 1983). Indeed, psychological, emotional, and interpersonal adjustment problems often continue after discharge into the community (Dew et al., 1983).

Woodrich and Patterson (1983, p. 26) state that it is not surprising that physical disability would create psychosocial adjustment problems "because of the difficulties faced in living up to society's expectations for behaviour, appearance, and vocational

pursuits". They suggest that social isolation and the general public's insensitivity to the needs of persons with disabilities contributes to psychosocial adjustment problems of persons with SCI. Similarly, Richards (1986) indicates that many persons with SCI are discharged into environments where there is a lack of understanding of the physical, educational, emotional, and social needs of persons with SCI. Richards also explains that necessary shifts in roles, activities, and life goals are not very apparent soon after SCI, but that increasingly shorter initial rehabilitation stays result in persons with SCI having to do more of the adjusting to these changes after discharge. Consequently, the traditional view of rehabilitation which focuses on attaining the highest possible level of physical functioning and independence (e.g., transferring, dressing) has been challenged based on the issue that physical skills, alone, do not determine successful community reintegration, adjustment to disability (Whalley Hammell, 1992), or quality of life (Eisenberg & Saltz, 1991). In fact, there has been discussion that the goal of SCI rehabilitation should be adjustment to disability in the context of a person's environment rather than medical recovery (Whalley Hammell, 1992). According to Krause (1992b), issues such as life satisfaction and psychological adjustment have already become the focus of SCI rehabilitation.

Much of the literature on adjustment to SCI reflects this more recent focus on psychosocial rehabilitation. Specifically, there has been considerable interest in identifying factors that contribute to successful adjustment to SCI (Trieschmann, 1988). For example, perceived control may be an important factor in adjustment to SCI (Crisp, 1992; Decker & Schulz; Schulz & Decker, 1985). Leisure, too, may be a mediating factor in adjustment to SCI (Caldwell et al., 1994/95; Cushman & Hassett, 1992; Lee et al.,

1993). Interestingly, some of the documented psychological benefits of leisure reflect indicators of adjustment to disability that have been used in SCI research. For example, leisure activity has been positively associated with life satisfaction (Coyle, Lesnik-Emas & Kinney, 1994; Coyle, Shank, Kinney, & Hutchins., 1993; Crewe, 1980; Crewe & Krause, 1990; DeVivo & Richards, 1992; Tinsley, 1984) and negatively associated with depression (Coyle et al., 1993; Gordon, 1982; Noreau & Shephard, 1995; Siosteen, Lundqvist, Blomstrand, Sullivan & Sullivan, 1990), and both life satisfaction and depression have been used to measure adjustment to SCI (Crisp, 1992; Decker & Schulz, 1985; Schulz & Decker, 1985). Research which suggests that leisure experiences can foster perceived control (Coleman & Iso-Ahola, 1993; Iso-Ahola, 1994) may offer additional insight as how leisure may enhance adjustment to disability for persons with SCI.

Unfortunately, leisure is often a problematic area for people with SCI. One reason for this may be related to the experience of increased free time after injury. Coyle et al. (1993) indicate that free time is more prevalent in persons with SCI than the general population. "Increased free time, however, does not always mean positive things for people with SCI" (Lee et al., 1993, p. 201). Lee et al. suggest that the experience of free time may be influenced by conditions of the injury like pain and fatigue (Schulz & Decker, 1985), which may preclude leisure participation. In addition, the physical disability may necessitate activity modifications to enable leisure participation, or it may result in the elimination of favourite leisure activities from an individual's repertoire (Lee et al., 1993). Furthermore, Lee and associates suggest that psychological symptoms like depression can affect how free time is experienced after SCI. In particular, persons who

are free of depression are more likely to participate in activities (Noreau & Shephard, 1995; Siosteen et al., 1990). Since persons with SCI have a higher risk of experiencing depressive episodes (Coyle et al., 1994; Coyle et al., 1993), persons with SCI who do experience depression may be less likely to participate in recreation activities during their free time. Increased free time after injury, therefore, is not necessarily associated with meaningful activity. Similarly, other research (Caldwell et al., 1994/95; Trieschmann, 1988) indicates that SCI is associated with high unemployment rates, boredom, and unconstructive, meaningless, passive activity.

According to Caldwell and Smith (1988), not all persons have the opportunity to experience leisure, due to attitudinal, situational or physical limitations, and so strategies such as leisure education are developed to enable persons with these limitations to experience leisure. Leisure education has been described as an educational process which helps people improve their quality of life through leisure (Aguilar, 1985; Gunn & Peterson, 1977; Mundy & Odum, 1979). It develops one's leisure lifestyle (Chinn & Joswiak, 1981), but also impacts total lifestyle (Bullock & Mahon, 1997). Leisure education helps an individual to acquire leisure skills, attitudes, and knowledge (Peterson & Gunn, 1984), and to develop an understanding of self and leisure (Bullock & Mahon, 1997) in order to facilitate freely chosen activities and to enhance life satisfaction (Bullock & Mahon, 1997; Dattilo & Murphy, 1991). Leisure education is most commonly associated with the provision of therapeutic recreation services and, therefore, most often applied to services for persons with disabilities (Dattilo & Murphy, 1991; Peterson & Gunn, 1984). It also is recognized as a process which facilitates transitions between settings and life stages (Bullock & Howe, 1991). Leisure education, therefore,

could be a useful transitional rehabilitation service for persons with SCI by addressing the problems that limit leisure participation of persons with SCI upon community re-entry. Research also indicates that leisure education can increase leisure satisfaction (Mahon & Martens, 1996; Zoerink & Lauener, 1991), life satisfaction (Bedini, Bullock, & Driscoll, 1993; Mahon & Searle, 1994; Searle, Mahon, Iso-Ahola, Adam Sdrolias, & van Dyck, 1995), perceived leisure control (Searle et al., 1995), and perceived control (Bedini et al., 1993). Consequently, leisure education can facilitate meaningful leisure experiences which may improve aspects of psychological well-being and, thereby, facilitate adjustment to disability.

Despite the potential role that leisure education can play in the rehabilitation process for persons with SCI, "the ability or opportunity to benefit from leisure among those with SCI is not yet well understood, nor well discussed in the literature" (Caldwell et al., 1994/95, p. 14). Caldwell et al. indicate that only a few studies have examined the role of therapeutic recreation (TR) in the lives of persons with SCI. For example, Zoerink (1988) studied the role of leisure education in the lives of persons with spina bifida, but this population is different from those with acquired SCI. Bullock & Howe (1991) studied the role of transitional TR services (i.e., from hospital to community) for persons with physical disabilities, including persons with SCI. Finally, Coyle et al. (1993) explored the role of therapeutic recreation (TR) during SCI rehabilitation, but there was no mention of leisure education protocol in this study nor of its specific impact. Rather, group leisure outings were more directly linked with the findings presented.

While leisure education has been recognized for its impact on psychological well-being (Searle et al., 1995), no studies have specifically assessed the effects of leisure

education on the adjustment to disability of persons with SCI. Additionally, there has been a noticeable omission in the literature and in practice on transitional programs (like leisure education) that bridge the gap from hospitalization to community living (Bullock & Howe, 1991; Caldwell & Gilbert, 1990). Furthermore, since knowledge on adjustment to SCI is incomplete (Dew et al., 1983; Stensman, 1994), and there is no clear consensus about what components are most critical to adjustment (Cushman & Hassett, 1992; Krause, 1992b), a better understanding of psychosocial factors and adjustment following SCI is needed (Buckelew et al., 1991). One important area of inquiry, therefore, is to determine whether leisure education can enhance particular aspects of psychological well-being that have been linked with adjustment to disability of persons with SCI.

Statement of the Problem

The purpose of this study was to examine the effects of a leisure education program on adjustment to disability of persons with SCI. First, it assessed the effect of leisure education on life satisfaction and depression, two established indicators of adjustment to disability. Second, it assessed the effect of leisure education on perceived control, perceived leisure control, and leisure satisfaction, which have been used to measure the impact of leisure education in previous research, and are related to both life satisfaction and depression. These three latter variables, therefore, served as secondary measures of adjustment to disability.

Hypotheses

1. Adults with SCI who completed a leisure education program would have higher levels of life satisfaction and lower levels of depression than a control group, when post-test scores were compared while controlling for the effects of pre-test scores.
2. Adults with SCI who completed a leisure education program would have higher levels of perceived leisure control, perceived control, and leisure satisfaction than a control group, when post-test scores were compared while controlling for the effects of pre-test scores.

Assumptions

1. Life satisfaction and depression are valid indicators of adjustment to disability.
2. Perceived leisure control, perceived control, and leisure satisfaction are directly related to life satisfaction.
3. Perceived leisure control, perceived control, and leisure satisfaction are indirectly related to depression.
4. Participants would answer pre- and post-intervention tests truthfully.

Delimitations

1. Participants were 18 years of age and older.
2. Onset of SCI occurred within the previous 7 years.
3. Participants were discharged from initial rehabilitation hospitalization, and were living within the city of Winnipeg, Manitoba or its immediate surrounding area.
4. The number of participants in this study was limited to 30, with 15 in an experimental group and 15 in a control group.

5. Participants had not participated in another leisure education or leisure counselling program.
6. Participants had no cognitive impairment such as brain injury, which would have precluded them from understanding and following the leisure education program content.
7. Participants were able to read basic English.
8. Participants were not taking medications to control depression.
9. Participants were identified by employees (i.e., Vocational Rehabilitation Counsellors, Rehabilitation Counsellors, Director of Rehabilitation Services) of the Canadian Paraplegic Association (CPA) - Manitoba division as being in need of leisure intervention services or as experiencing some difficulty in adjusting to their disability.

Limitations

1. Adjustment to disability is influenced by many factors and there is no consensus as to which factors are most crucial. It was not possible, therefore, to control for all potential factors that may influence adjustment to disability.
2. There is a lack of availability of standardized measurements for use with persons with SCI. One questionnaire that was used in this study, the Life Satisfaction Index-A (Neugarten, Havighurst, & Tobin, 1961; Adams, 1969) had been used in previous studies on SCI, but was developed for use with older adults. The Perceived Leisure Control Scale (Witt & Ellis, 1987) and the Leisure Satisfaction Scale (Beard & Ragheb, 1980) also was used in this study, but had not been used in previous SCI research.

3. Some participants required physical assistance to record written responses during pre- and post-testing.

Definition of Terms

1. Persons with SCI - Individuals who have acquired damage to the neural elements in the spinal cord, resulting in any temporary or permanent degree of sensory or motor deficit, autonomic dysfunction, or bladder/bowel dysfunction (Manitoba Neurotrauma Initiative, 1996/97).
2. Adjustment to disability - a psychological construct which reflects "Satisfaction and acceptance of changed physical, psychological, and social circumstances" (Lee et al., 1993, p. 201). In the present study, 'adjustment to disability' reflected psychological adjustment to disability.
3. Leisure - "an enjoyable experience in which people choose to participate with relative freedom in terms of discretionary time and particular activities, within the context and limitations of culture, socio-economic factors, and gender. Leisure experience can be objective and/or subjective, long-lasting or brief, planned or spontaneous, an end in itself or therapeutic/compensatory, sociable or solitary" (Horna, 1994, p. 47).
4. Leisure education - "an individualized and contextualized educational process through which a person develops an understanding of self and leisure and identifies and learns the cluster of skills necessary to participate in freely chosen activities which lead to an optimally satisfying life" (Bullock & Mahon, 1997, p. 381).

5. Life Satisfaction - "a multi-dimensional, social psychological variable which reflects a psychological well-being" (Peppers, 1976, p. 442). It refers to gratification and contentment in life (Brodsky, 1988).

6. Leisure Satisfaction - the degree to which an individual experiences "meaningful leisure" (Ragheb & Griffith, 1982).

7. Depression - an individual's negative conceptions of their self-worth, performance, health, or personal characteristics, and of the meaning of existence (Beck, 1970).

8. Perceived Leisure Control - the "degree of internality, or the extent to which the individual controls events and outcomes in his/her leisure experiences" (Witt & Ellis, 1987, p. 12).

9. Perceived control - a feeling an individual has that he or she can predict and control his or her own environment (Iso-Ahola, 1980).

REVIEW OF LITERATURE

Adjustment to SCI has been defined, explained, and studied in a variety of ways, resulting in many contradictions surrounding this topic. This chapter discusses how adjustment to disability has been defined and measured in relation to persons with SCI, and highlights current issues related to the study of adjustment to disability. This is followed by a review of a number of factors that have been studied in relation to adjustment to SCI and an examination of three constructs that have been selected for the present study from the adjustment to SCI literature: perceived control, life satisfaction, and depression. In addition, the potential role of leisure in facilitating adjustment to disability is discussed according to each of the three above constructs as well as according to two leisure-related constructs: leisure satisfaction and perceived leisure control. Finally, this chapter reviews relevant leisure education literature and discusses the potential role of a leisure education intervention in facilitating adjustment to disability of persons with SCI.

Defining Adjustment to Disability

Adjustment, in general terms, occurs when the demands of life are in balance with one's abilities to manage them; it is the point of holding oneself in equilibrium between discomfort and comfort (Brodsky, 1988). Brodsky also suggests that, in contrast, maladjustment occurs when some demand of life has presented a burdensome situation that outweighs everything else and results in feelings of helplessness or frustration. If this description of adjustment was applied within the context of disability, then adjustment to disability might occur when the demands of (or problems related to) disability are in

balance with one's ability to manage them. The 'demands of', or problems related to, disability might be personal, societal, or environmental problems. 'One's ability to manage' these problems connotes that a person might play a regulatory role, which would require feelings of control, in the process of successfully adjusting to disability.

Defining and measuring adjustment to a non-normative life crisis (such as disability), however, is a recurring challenge in research (Schulz & Decker, 1985). In fact, studies rarely define adjustment to disability in a similar manner (Trieschmann, 1988). The inconsistency in definitions underscores the perspective that adjustment to disability is an umbrella term that describes many individual behaviours across time (Trieschmann, 1988) and which taps a number of dimensions including feelings, attitudes, and behaviour (Richards, 1986). Inconsistent definitions also reflect claims that the process of adjustment is dynamic (Krause, 1992b; Trieschmann, 1988), exceedingly complex and life-long (Trieschmann, 1988), specific for each individual, and dependent on several different factors (Stensman, 1994).

Much of the literature on adjustment to SCI defines adjustment in relation to its components and these descriptions are often psychological in nature. For example, Fuhrer (1994) equates mental adjustment to "aspects of a person's mental health e.g., anxiety, depression, perceived control of one's life" (p. 359). Adjustment has also been explained as coping (Schulz & Decker, 1985; Stensman, 1994), and Noreau and Shephard (1995) suggest that psychological health facilitates the process of coping with SCI. According to Graney and Graney (1973), coping strategies may be more appropriately subsumed under an 'adjustment' construct. They also indicate that well-being and adjustment are related constructs. Lee et al. (1993) provide a specific definition of adjustment to disability

which is also psychological in nature. They define adjustment to disability as "Satisfaction and acceptance of changed physical, psychological and social circumstances" (Lee et al., 1993, p. 201).

Trieschmann (1988) offers an additional element to the concept of adjustment to disability. She argues that too much emphasis has been placed on the personal resources of the individual as the key to success in adjustment and that not enough emphasis has been placed on the environment. Accordingly, she describes adjustment to disability as a balance of the mind-body system within the environment in which it lives; the interactive result of three influences in life: psychosocial (intrinsic personal values), biological or organic, and environmental. This definition suggests that societal or environmental factors including transportation, employment, and attitudinal and architectural barriers influence adjustment to disability. Similarly, Whalley Hammell (1992) considers the importance of the environment in adjustment, stating that persons must "learn to live with the resulting disability in the context of (their) own environment" (p. 317). Others have discussed the likely impact of environmental changes on adjustment, but note that there is little empirical evidence about this to date (Krause, 1992a; Krause & Crewe, 1991).

Measuring Adjustment to Disability

Studies on adjustment to SCI often measure short-term adjustment or long-term adjustment. Short-term adjustment research occurs within the first year or two after injury and tends to focus on disruption of affect (e.g., anxiety, fear, and depression) (Krause & Crewe, 1991). Disruption of affect is often measured by various measures of depression. For example, Cook (1979) used a shortened version of the Minnesota Multi-Phasic

Inventory (MMPI) (Dahlstrom & Welsh, 1960) to determine whether persons who were newly injured had different reactions to SCI, and Richards (1986) used the Beck Depression Inventory (BDI) (Beck et al., 1979) to determine psychological adjustment of newly injured persons. According to both Crisp (1992) and Schulz and Decker (1985), the major area of focus for adjustment-related social psychological research has been on individuals' reactions and adjustment during the period of time immediately following SCI, when stress levels are likely to be high. Subsequently, knowledge about attitudes, feelings and coping mechanisms during such acute stressful periods has increased significantly (Schulz & Decker, 1985).

There may be differences between coping successfully immediately after a traumatic event such as SCI and coping successfully many years later (Schulz & Decker, 1985). How persons cope years after SCI onset is the focus of long-term adjustment research. Accordingly, long-term adjustment research tends to focus on indicators of quality of life (e.g., employment, absence of depression, life satisfaction) as opposed to disruption of affect (Krause, 1992b). For example, Crewe and Krause (1990) used the Life Situation Questionnaire (LSQ) (Krause & Crewe, 1974) to compare aspects of adjustment (i.e., work, social activities, medical treatment, life satisfaction, and self-rated adjustment) between a sample of individuals who were at least 2 years post-SCI and persons from this same sample 11 years later. Other long-term adjustment research (Decker & Schulz, 1985; Schulz & Decker, 1985) assessed the psychological and subjective well-being (i.e., depression and life satisfaction) of a group of middle-aged and older people who were approximately 20 years post-SCI using the Life Satisfaction Index-A (Adams, 1969) and the Center for Epidemiologic Studies - Depression Mood Scale

(CES-D) (Radloff, 1977). Similarly, Crisp (1992) used the LSIA-A and CESD-D scales, along with an assessment of vocational identity in his study of persons injured an average of 11.9 years earlier.

While most studies on adjustment to SCI tend to measure either short-term or long-term adjustment, some studies have measured adjustment over a range of years which includes both the initial period of time after injury and years later. Such studies have used psychological measures or self-reports of quality of life. For example, Woodrich and Patterson (1983) used Linkowski's (1971) Acceptance of Disability (AD) Scale on a sample of persons who were between 6 months and 22 years post-SCI. Stensman (1985) used a rating scale from 0 to 10 to measure subjective quality of life (QOL), or 'overall life satisfaction', of persons he followed from .5 years to 5 years post-SCI. Finally, Dew et al. (1983) developed and used a structured interview to measure reaction to SCI and adjustment of 111 persons, 42% of whom had been injured within 5 years of the interview, and 36% of whom had been injured for greater than 10 years.

Measurement Issues

In her comprehensive review of long-term SCI adjustment, Trieschmann (1988) identifies measurement problems related to the study of SCI adjustment. First, she states that adjustment is an abstract term that cannot be measured directly, but can only be inferred by measuring the component behaviours of it. It may be added that since adjustment taps not only behaviour, but also feelings and attitudes (Richards, 1986), adjustment can only be inferred by measuring its component behaviours, feelings, or attitudes. Unfortunately, research often measures 'adjustment' in nonspecific terms and such vagueness, in addition to dissimilar definitions of adjustment, makes comparison of

results difficult (Trieschmann, 1988). For example, Trieschmann criticizes a study by Kerr and Thompson (1972), in which the mental adjustment of persons with SCI was examined, and the methodology for obtaining the adjustment ratings of 'failure, poor, fair, good, and excellent' was not described. Also, she points out that the criteria used to measure satisfactory versus unsatisfactory pre-injury history was not specified. Similarly, Athelstan and Crewe (1979) employed non-specific measurement criteria in their study on psychosocial adjustment of persons with SCI. They had three counselling psychologists subjectively rate adjustment into 3 categories, ranging from 1 for good adjustment, to 3 for poor adjustment, but "without specifying in advance any criteria for evaluating adjustment..." (Athelstan & Crewe, 1979, p. 315).

Second, Trieschmann (1988) queries the appropriate time to administer psychological tests for assessment of mental adjustment, since adjustment is a dynamic and life-long process. She cautions researchers to consider whether such assessments are sensitive to daily changes or whether they reflect more enduring behaviour patterns. Furthermore, she suggests that since adjustment occurs in one's own environment (i.e., after hospital discharge), ratings of adjustment made while in the hospital may instead reflect adherence to hospital policy. To minimize the effects of timing in the administration of psychological tests, Trieschmann recommends doing longitudinal studies. Also, she suggests that adjustment ratings should be based on multiple measures of functioning in life and that multiple levels of measurement should be used to examine the emotional aspects of disability. Furthermore, she states that direct measures of behaviour which involve direct behavioral observations could be used to complement standardised psychological measures and participants' self-reports. In contrast, Schulz

and Decker (1985) defend the use of standardised tests. They indicate that evaluations of adjustment are often based on the assessment of health care professionals who work with persons with SCI (such staff assessments may be inaccurate and misleading - see section 'Staff attitudes and depression' on p. 41 of this proposal), and that an advantage of using standardised instruments to assess adjustment is that responses can be compared to existing data for non-injured populations.

Third, when using standardised psychological tests, professionals should consider the purpose for which it was intended (Trieschmann, 1988). For example, many studies have used the MMPI (Dahlstrom & Welsh, 1960) to assess emotional reaction to SCI. The MMPI, however, was designed to diagnose psychopathology (e.g., clinical depression) in the general population, and some of the items within the MMPI are somatic in nature. Within the SCI population, these somatic indicators may be confounded by the physical sequelae of SCI (Krause & Crewe, 1991; Trieschmann, 1988). It is important to remove such confounding items from these inventories, as Richards (1986) did with the Beck Depression Inventory (BDI) (Beck et al., 1979), or employ a measure such as the Center for Epidemiology Scale (CES-D) (Radloff, 1977), which was designed to minimize the impact of somatic items that exist in other depression scales. Similarly, Krause and Crewe caution against using measures that were developed for a geriatric population, such as the Life Satisfaction Index - A (Adams, 1969), on SCI populations. In such instances, it may be possible to use such measures on older persons with SCI, and for younger SCI populations, modify wording to reflect SCI. Unfortunately, few alternatives exist, as there is a lack of standardized instruments for

persons with SCI as well as a lack of appropriate measures from the nondisabled population (Krause & Crewe, 1991).

Another controversial issue inherent in the measurement of adjustment to SCI is a key assumption on which the use of psychological tests is based - that the SCI population is a homogeneous population. Some writers assert that one cannot assume a homogeneous personality reaction to SCI when the only common feature among these persons is the physical disability (Trieschmann, 1988; Whalley Hammell, 1992). In addition, scholars (e.g., Richards, 1986; Trieschmann, 1988) caution that total group averages tend to obscure important variations in response to SCI (e.g., they bypass individuals with the most severe adjustment problems). Consequently, Trieschmann suggests that until the critical subject variables that influence adjustment have been identified, researchers should describe the sample of participants in great detail. Furthermore, in recognition of the heterogeneity of response to SCI, she states that researchers should control for demographic variables such as age and gender, and that data analysis should include not only an examination of averaged test profiles, but also an examination of individual differences.

In sum, the controversy surrounding the measurement of adjustment to disability of persons with SCI points to the need for researchers to exercise caution in choosing their study design and in their choice of measurements. Researchers should recognize that adjustment is a global term which requires the measurement of its component feelings, attitudes, or behaviours. Both the definition adopted and the measurement criteria employed should be clearly stated, and should be reflective of each other. Multiple measures of behaviour, feelings, or attitude should be used, and participants'

characteristics should be well defined. Overall, researchers should acknowledge the limitations of certain psychological tests when measuring adjustment to SCI, and take steps that minimize flawed results.

Factors Studied in Adjustment to Disability

Many studies attempt to identify factors that are associated with successful adjustment to SCI (Trieschmann, 1988). For example, measurements of adjustment to disability, such as life satisfaction and various aspects of mental health, have been assessed for covariation with variables such as age, age at injury, duration of injury, family relationships and social life, health, spiritual life, daily living tasks, employment, living arrangements, sex life, and money matters (Schulz & Decker, 1985; Fuhrer, Rintala, Hart, Clearman, and Young, 1992). Additional variables that have been studied in relation to adjustment to SCI include gender (Trieschmann, 1988; Woodrich & Patterson, 1983), physical pain, personality, locus of control (Trieschmann, 1988), manner of onset of disability (Athelstan & Crewe, 1979), educational level (Woodrich & Patterson, 1983), social support, and perceived control (Crisp, 1992; Decker & Schulz, 1985; Schulz & Decker, 1985). The following section reviews how many of these factors have been examined in the literature on adjustment to SCI.

Time Since Injury

While it has been recognized that adjustment to SCI occurs over many years, the question arises as to whether adjustment improves in accordance with increased time since injury, or duration of disability. Many studies on adjustment to SCI indicate that duration of disability is positively related to psychological status. For example, time since

injury has been found to be positively related to life satisfaction (Decker & Schulz, 1985; Schulz & Decker, 1985), acceptance of disability (Woodrich and Patterson, 1983), and similarity of actual life to ideal life (Cook, 1979). In the longest longitudinal study conducted on adjustment to SCI, Krause (1992a) observed improvements in adjustment over a 15-year period of 256 former hospital patients who averaged 9 years post-SCI. Participants showed increased satisfaction with employment and finances, a longer average sitting tolerance, fewer hospitalizations and fewer days hospitalized. Krause and Crewe (1991) also provide strong support for the positive effect of time since injury on adjustment. They used a sophisticated data analytic design (i.e., time-sequence analysis) to assess the relationship between three aspects of aging (chronological age, time since injury, and time of measurement) and post-SCI adjustment. Among their findings, time since injury was positively correlated to adjustment and helped counteract the adverse effect of increasing age on adjustment. Similarly, the findings of Crisp (1992) support the importance of time since injury. Crisp found that mean life satisfaction and depression scores on his sample of younger persons (under 40 years) who were 11.9 years post-SCI were similar to that of Schulz and Decker's (1985) older sample of persons (over 40 years) who were 20 years post-SCI (using the same measurements). Since Krause and Crewe (1991) indicate that age and time since injury work against each other (i.e., the oldest persons and those with the least time since injury have the most difficulties in adjusting), persons in Schulz and Decker's sample, though older, had more time to adjust to their disability than the younger persons in Crisp's sample. Therefore, time since injury may have a mediating effect on age and adjustment to disability.

Furthermore, numerous studies have found that the initial period post-SCI is where most remarkable improvements in adjustment occur. For example, Richards (1986) studied psychological adjustment of persons with SCI during their first postdischarge year and found that participants showed increased distress and anger immediately after discharge from initial hospitalization, but their psychological adjustment increased to a level that was comparable to a non-disabled control group by the end of the first year after injury. This finding was true, regardless of injury level, race, gender and age. Similarly, Gordon (1982) found that activity patterns of persons with SCI had become more like that of nondisabled persons over the first two years following discharge from initial hospitalization. Furthermore, Krause and Crewe (1991) found that psychological adjustment of persons with SCI increased over an 11 year period, but that "SCI (had) its most devastating impact...on the persons with the least time since injury" (p. 98). In a similar study, Crewe and Krause (1990) conclude that the immediate post-injury period may be the time when more dramatic changes in adjustment occur, since adjustment of participants improved only slightly from 2 years until 11 years post-SCI.

Other studies which support the time since injury theory show that the time period in which adjustment problems may be most pronounced may continue beyond the first two years post-SCI. For example, Lundqvist et al. (1991) found that psychosocial function and mood states varied considerably during the first 4 years post-SCI, but that emotional state and social lives improved after this initial period. Cook (1982) followed injured persons after discharge into the community and found that mood and attitude were less than optimal at rehabilitation entry, but life satisfaction, self perceived adjustment, and goal accomplishment of the majority of persons at 5 years post-SCI were

similar to noninjured community residents. Trieschmann (1988) suggests that important milestones in the process of adjusting to SCI might be less than 1 year after onset, 1 to 3 years, 4 to 7 years, and over seven years after SCI onset. Overall, the above findings suggest that adjustment problems may be more evident within the first several years post-SCI, and that adjustment may improve with increased time since injury.

Other studies, however, do indicate that time since injury is unrelated to adjustment to disability. For example, Stensman (1994) measured the subjective quality of life (QOL) of persons through a series of interviews from .5 to 5 years post-SCI and identified four different patterns of coping which did not support the time since injury theory. In particular; (a) 5 of 17 participants showed good coping, with an almost unchanged QOL post-SCI, (b) 6 participants reported good coping after an initially low QOL after injury, (c) 2 participants reported an unstable QOL, and (d) 4 participants reported a continually low QOL with no improvement over the study period. Despite these findings, it is interesting that the participants reported the first half-year after injury onset as, overall, 'the most difficult time'. This lends support to other research, discussed above, which demonstrates that adjustment difficulties may be most evident soon after SCI. Other studies that do not support the time since injury theory include both Buckelew et al. (1991) and Cook (1979), who found that time since injury was unrelated to psychological distress, and Crisp (1992), who found that time since injury was unrelated to either life satisfaction or depression scores of individuals who were interviewed at least 5 years post-SCI. Similarly, Coyle et al. (1994) studied life satisfaction among adults with SCI (aged 18 to 50 years) and found no significant differences in life

satisfaction scores when compared with length of time since disability (i.e., grouped according to 1 to 3 years, 4 to 6 years, and more than 6 years after SCI onset).

In sum, the literature provides inconclusive evidence that time since injury is either directly related or unrelated to adjustment to disability. These inconsistencies point to the need for further research that examines time since injury in relation to adjustment to SCI.

Level of Injury and Severity of Disability

Given that persons with quadriplegia have greater physical limitations than paraplegics, the question arises as to whether quadriplegics are less well-adjusted than paraplegics (Trieschmann, 1988). The majority of the literature reviewed suggests that neither level of injury nor severity of disability influences adjustment to disability. For example, Woodrich and Patterson (1983) found that severity of disability was unrelated to acceptance of disability. Coyle et al. (1994) found no significant associations between life satisfaction and either severity of disability or type of disability (i.e., quadriplegia or paraplegia). Cook (1979) found that level of injury was not related to psychological distress and Cushman and Hassett (1992) found that neither level nor completeness of injury affected adjustment or quality of life ratings in their study of long-term psychosocial adjustment to disability. In addition, Crisp (1992), Decker and Schulz (1985), and Schulz and Decker (1985) found that adjustment (measured by depression and life satisfaction) was not correlated highly with severity of SCI. Overall, "there is no evidence that high levels of injury and greater functional limitation lead to poorer adjustment to SCI" (Trieschmann, 1988, p. 267).

Despite this evidence, one study reviewed showed that level of injury was related to depression. MacDonald et al. (1987) found that 86% of persons who were clinically

depressed according to the Clinical Depression Measure (CDM) (Breiter, Dobson, & Shaw, 1983) were quadriplegics, whereas only 14% were paraplegics. Interestingly, there were no statistically significant differences between quadriplegics and paraplegics on either the Beck Depression Inventory (BDI) (Beck et al., 1979) or the Multiple Affect Adjective Check List (MAACL) (Zuckerman & Lubin, 1965), both of which measure transient moods (MacDonald et al., 1987). One other notable finding that provides limited support that severity of injury may be related to adjustment comes from Decker and Schulz (1985) and Schulz and Decker (1985). They found that there was a tendency for participants with greater disabilities to report lower levels of subjective and psychological well-being, although correlations were not high.

Overall, Trieschmann (1988) recommends that severity of disability should continue to be studied since the demands and circumstances of life for quadriplegics and paraplegics are different and, thus, types of coping styles may vary. For example, quadriplegics are more limited in function of mobility, recreation, pastime, and communication activities such as handwriting (Lundqvist et al., 1991), and they generally have lower activity levels than paraplegics (Gordon, 1982; MacDonald et al, 1987). Furthermore, MacDonald et al. indicate that depression seems to reduce activity levels (work and travel) of paraplegics more so than that of quadriplegics, perhaps due to an already low activity level of quadriplegics. Taken together, the above findings suggest that level of disability and severity of disability should be considered in future studies on adjustment to SCI.

Age and Age at Onset of Injury

Past research suggests that age is negatively correlated with adjustment to SCI, particularly age at onset (Krause & Crewe, 1991; Trieschmann, 1988). For example, Woodrich and Patterson (1983) found that youth (regardless of duration of disability) contributed to better acceptance of disability and Decker and Schulz (1985) and Schulz and Decker (1985), who measured long-term adjustment of persons aged 40 years and older, found that younger persons with SCI as well as those injured at a younger age reported significantly higher levels of life satisfaction and lower levels of depression. Trieschmann indicates that, on average, onset before age 25 seems associated with better adjustment whereas others have found that persons aged 35 years or older experienced more difficulties in adjustment than younger persons with SCI (Cook, 1979; Stensman, 1994). Trieschmann suggests, however, that there are tremendous individual differences, and that social psychological stage of adulthood, instead of age per se, may be the factor that influences adjustment. Specifically, she suggests that persons who become injured during the formative ages of 20 through 35 (i.e., when identity and life roles are established) may be better able to incorporate disability into their identity. It also may be possible that persons injured later in life may have less enthusiasm for life because of reduced energy levels that come with aging (Stensman, 1994; Trieschmann, 1988) and also because they may feel they have lived the major part of their lives already (Trieschmann, 1988). Krause and Crewe (1991), who found that both youth and time since injury favoured SCI adjustment, conclude that persons injured at a younger age have a greater opportunity (i.e., more time) to adjust, whereas persons injured later in life may not live long enough to properly adjust to their disability.

Fewer studies have found no relationship between age and adjustment to SCI. For example, Crisp (1992) found no mean differences in the same measures of adjustment between his sample and an older sample studied by Schulz and Decker (1985). Crisp also found that age was unrelated to adjustment (i.e., life satisfaction, depression, and vocational identity) within his own sample of persons with SCI. Similarly, Buckelew et al. (1991) found that age was unrelated to adjustment to SCI as measured by the Symptom Checklist-90-Revised (SCL-90-R) (Derogatis, 1977) and Multidimensional Health Locus of Control scales (Wallston, Wallston, & De Vellis, 1978).

Overall, the findings on age and adjustment to SCI are inconclusive. More often than not, however, studies suggest that chronological age is a factor in adjustment and that persons injured at an earlier age are better able to adjust to SCI. Trieschmann (1988), therefore, underscores the need for further attention to age and particularly, age of onset as factors in adjustment to SCI.

Pain

The literature frequently demonstrates that pain is negatively related to adjustment to SCI. For example, Stensman (1994) found that poor coping was related to physical pain while absence of pain had a positive influence on the adjustment process. This is consistent with other research (Coyle et al., 1993; Lundqvist et al., 1991; Trieschmann, 1988), which indicates that pain inhibits adjustment to SCI.

Other Demographic Variables

Woodrich and Patterson (1983) found that gender and educational level were significantly related to acceptance of disability, whereas marital status, and race/ethnicity were not significantly related in this regard. More specifically, they found that females

and higher education contributed to better adjustment to disability. Trieschmann (1988) indicates that since the majority of persons who become spinal injured are males, both samples used in studies and findings are more representative of males. It makes sense, then, that SCI adjustment of females requires further attention.

Trieschmann (1988) also indicates that socioeconomic status (SES) can influence SCI adjustment. She states that SES influences one's personality up until the time of injury and that SES also is related to the environmental resources available to a person after injury. Similarly, and in contrast to Woodrich and Patterson's (1983) findings on race, Trieschmann contests that culture and ethnic background also should impact SCI adjustment, since these factors influence one's personality and values both prior to and following injury. While she acknowledges that there is insufficient data to support this theory, she suggests that "future research should specify the nature of the subject population more precisely so we can begin to assess the role of SES and culture as factors in the adjustment to SCI" (Trieschmann, 1988, p. 270).

Research also suggests that employment status may contribute to adjustment, but that it may not be as significant a predictor as once believed. For example, Cook (1982) indicates that most studies conducted between 1954 and 1979 defined successful postservice (i.e., post-discharge) adjustment as employment. He suggests, however, that participation in vocational activities (which includes employment) is only one of four major dimensions of postservice adjustment. Additional research (Crisp, 1992; Decker & Schulz, 1985; Schulz & Decker, 1985) which found that employment status was associated with life satisfaction, but not with depression led Crisp (p. 46) to conclude that "psychological adjustment cannot be simply equated with being employed". Trieschmann

(1988), too, reports that employment status alone has not been an adequate predictor of adjustment to SCI in most research. Nonetheless, employment status may be a factor that contributes to SCI adjustment, as suggested by Cook. Therefore, it should continue to be assessed in future SCI adjustment research.

Personality

Several studies demonstrate that personality characteristics can influence adjustment to SCI. Stensman (1994) found that personality (obstinacy and positive attitude) influenced adjustment to SCI, and Trieschmann (1988) concludes that characteristics such as aggressiveness, adventurousness, intellectual interests, creativity, and being goal-oriented may enhance SCI adjustment. Elliott et al. (1991) found that persons who were assertive had lower post-injury depression scores. Similarly, Athelstan and Crewe (1979) indicate that persons who are risk-takers, adventurous, and rebellious tend to adjust better to SCI, perhaps because they have an internal locus of control. Trieschmann indicates that those who have an internal locus of control perceive that their behaviour influences their surrounding environment, and that they tend to be more active, less depressed, more productive, and more satisfied with life after discharge from initial hospitalization. Interestingly, Dew et al. (1983, p. 35) observed from their interviews on adjustment that "the majority of patients, 73%, attributed their own degree of rehabilitation success to self-drive".

Environmental Factors

Buckelew et al. (1991) suggest that health care policy changes, such as the trend towards earlier discharges from hospital, may be an important factor in adjustment to SCI, since persons with SCI in their study who were discharged more quickly from acute

care into acute rehabilitation reported greater anxiety, phobic anxiety, and hostility. This finding is consistent with Dew et al. (1983), who suggest that length of initial hospitalization may be a predictor of adjustment to disability. Also, Krause (1992a) suggests that findings from both his study and from Krause and Crewe (1991), which show positive changes in adjustment of persons with SCI over 11 years and 15 years respectively, likely reflect improvements in the environment made over time (e.g., public transportation, attendant care, work incentive legislation). He also concludes that adjustment continues to improve long after the initial rehabilitation period, supporting both Trieschmann's (1988) and Hammel's (1992) descriptions of adjustment as a lifelong process of learning to live with a disability in one's own environment. Furthermore, Trieschmann states that environmental barriers may influence adjustment to disability by limiting activity levels of persons with SCI, thereby handicapping the achievement of personal goals and lowering moods and satisfaction. She suggests that removing environmental barriers may be the key to normal activity, which will then enhance adjustment to SCI.

Social Support

The literature clearly indicates that social support is positively associated with adjustment to disability. For example, Stensman (1994) studied adjustment to SCI of persons within the first 5 years after injury and found that good support and social relationships had a positive influence on the adjustment process. In particular, he found that 'support from spouse', followed by 'good contact with friends' were commonly reported factors that contributed to the adjustment of persons with SCI. Similarly, Hammel acknowledges family support as a factor that contributes to the process of

adjustment. The majority of respondents in Dew et al.'s (1983) study also acknowledged staff and family support as important factors during their rehabilitation. Thus, both family and friends appear to be important sources of social support which contribute to SCI adjustment, with family being a stronger source of support. Furthermore, several studies (Crisp, 1992; Decker & Schulz, 1985; Schulz & Decker, 1985) assessed social support in relation to the psychological well-being (i.e., life satisfaction and depression) of a group of persons with SCI, and found that high levels of well-being (i.e., higher life satisfaction and lower depression scores) were positively related to high levels of social support and satisfaction with social contacts. Satisfying social contact, however, was a stronger predictor of adjustment than social support. Crisp concludes that social contact was important regardless of how supportive the contact. This also suggests that satisfaction with social support may be more important than type or degree of social support.

Elliott et al. (1991) examined the roles of assertiveness and several types of social support in psychological adjustment to SCI and found that assertive persons who reported high levels of 'Guidance' support (e.g., support from professionals who often try to control client behaviour) were more depressed than assertive persons who reported low levels of 'Guidance' support. They conclude that overinvolvement and intrusiveness of others, in addition to a lack of control in one's own affairs, may be sources of distress in social support.

Some studies have found that perceptions related to social support may be more important to psychological health than actual social support. For example, in a study that explored the relationships among social support, adjustment and health status of persons who were at least 1 year post-SCI, Anson, Stanwyck, and Krause (1993) found that the

perception of willingness to contribute social support in the community may have been more important than behaviour, and independent of behaviour in affecting health and adjustment. Furthermore, Anson et al. (1993) indicate that there exists a "conventional assumption that efficacious social support is that which is received" (p. 637). These authors measured reciprocal social support and found that participants' perceptions of ability to give support, as well as to receive support within their social networks of family and friends, and within the community was positively related to health and adjustment. In other words, the belief that one can contribute within his or her social support network may be as important as the belief that one can receive social support. Anson and associates conclude, therefore, that perceived inability to participate in supportive relationships within one's social network may lead to health and adjustment problems.

The literature on social support discussed above suggests that social support enhances psychological adjustment to SCI, but that certain factors may influence this outcome. In particular, types of support, levels of support, amount of participant regulation of support, and participant perceptions of support may influence research outcomes.

In sum, the literature reviewed above illustrates how adjustment to SCI is influenced by many variables. Also, some of the findings among the studies are contradictory, suggesting that there is no 'one way' that all people adjust to SCI. Indeed, there is no clear consensus about, exactly, what components are most critical to adjustment (Cushman & Hassett, 1992; Krause, 1992b). This is not to say, however, that there are no consistencies in the adjustment to SCI literature. In fact, Trieschmann (1988) concludes from her review of literature on long-term adjustment that youth, financial

security, warm and loving backgrounds, transportation, having a high activity level, returning to social and vocational involvement, having a good self-concept, and interpersonal support are important variables which enhance adjustment. She also suspects that locus of control may be an important factor in adjustment to SCI. While aspects of personal control have been mentioned above in relation to the factors of personality and social support, a closer examination of personal control is warranted. In particular, perceived control, which is related to the construct of locus of control, has received considerable attention in the literature. This variable, and its potential contribution to adjustment to SCI, is discussed in more detail in the following section.

Perceived Control

Perceived control has been defined as "the perception that salient or valued aspects of one's life are manageable" (Wallhagen, 1993, p. 220). Iso-Ahola (1980) describes perceived control as a feeling an individual has that he or she can predict and control his or her own environment. According to Purcell and Keller (1989), the literature addresses control in a variety of ways, including perceived control, learned helplessness, power, and uncontrollability. For example, Seligman's (1975) theory of learned helplessness proposes that an individual who has learned over time that he or she has a loss of control over reinforcers, such as elements that relieve suffering, bring gratification, or provide nurture, feels helpless. Seligman stresses that it is the belief or perception of control over such reinforcers that influences feelings of helplessness. Thus, a lack of perceived control in one's life may lead to feelings of helplessness.

According to Trieschmann (1988), the onset of disability (such as SCI) imposes a change in lifestyle, and a loss of some of the rewards and satisfactions (i.e., reinforcers) that were enjoyed prior to disability. In addition, she argues that persons in the early stages of SCI treatment are placed in helpless positions and that some persons may become susceptible to the belief that they can no longer control rewards and satisfactions in their lives. Similarly, Decker and Schulz (1985, p. 741) state, "Because the spinal cord-injured person has lost so much control over his or her body and environment, issues of...control are very important". It is apparent, therefore, that persons with SCI may be at increased risks of experiencing a loss of perceived control in their lives. This, in turn, has implications for adjustment to SCI since the literature suggests that perceived control may be an important factor in adjustment to disability of persons with SCI. For example, Crisp (1992), Decker and Schulz (1985), and Schulz and Decker (1985) found that, of several correlates including social support and perceived health status, perceived control was most strongly related to long-term adjustment of persons with SCI. Interestingly, perceived control has also been implicated in the psychological well-being of older adults in a nursing home (Langer & Rodin, 1976; Rodin & Langer, 1977) and in the adaptive state (adaption defined as life satisfaction, depression, and subjective symptoms of stress) of caregivers of relatives with disabilities (Wallhagen, 1993).

Given the importance of perceived control in the research stated above, it is reasonable that efforts aimed at increasing the perceived control of persons with SCI might help to facilitate successful adjustment to disability. In fact, Athelstan and Crewe (1979) suggest that interventions that restore or enhance one's belief in self-power to

control his or her fate; that emphasize self-determination, would be useful for persons with SCI.

Psychological Indicators of Adjustment to Disability

Life Satisfaction

Coyle et al. (1994) contend that it is the assessment of subjective cognitions of persons with SCI that may be most important when trying to understand life satisfaction. Accordingly, life satisfaction has been conceptualized as a subjective construct in much research and is difficult to study because it depends on subjective self-reports (MacNeil & Teague, 1987). It has been described as a component of subjective well-being (Decker & Schulz, 1985; Fuhrer, 1994; Fuhrer et al., 1992; Liang, 1984; Schulz & Decker, 1985) and as gratification and contentment in life (Brodsky, 1988). Similarly, Fuhrer (1994) concedes that life satisfaction is strongly related to happiness, and says it makes sense to consider the happiness of rehabilitation recipients when evaluating their outcomes. Life satisfaction also has been conceptualized as "a multi-dimensional, social psychological variable which reflects a psychological well-being..." (Peppers, 1976, p. 442). In fact, several researchers (Crisp, 1992; Neugarten et al., 1961; Decker & Schulz, 1985; Schulz & Decker, 1985; Searle et al., 1995) have conceptualized life satisfaction as an indicator of psychological well-being. In his discussion about measuring life satisfaction, Liang (1984) proposes that life satisfaction includes the components of zest for life, mood tone, and congruence between desired and achieved goals. Perhaps a less subjective conceptualization of life satisfaction is Ragheb and Griffith's (1982, p. 302) description in

which "life satisfaction is a composite of the different satisfactions (e.g., family, financial, standards of living, work, health, and leisure)".

Much of the research conducted on persons with SCI indicates that life satisfaction post-SCI, on average, is lower than that of non-disabled populations (Coyle et al., 1993; Crewe, 1980; Decker & Schulz, 1985; Dew et al., 1983; Fuhrer et al., 1992; Schulz & Decker, 1985). Other researchers (Cameron, Titus, Kostin, & Kostin, 1983; Cook, 1982; Yerxa & Baum, 1986) have found contrasting results, but some of these studies have been criticized for their methodology. For example, Yerxa and Baum found a higher mean life satisfaction score for persons with SCI than for non-disabled participants, but Coyle et al. state that these results were likely influenced by a small sample size (SCI = 15, non-disabled = 12). Also, Cameron et al. claimed they found no statistical difference between the mean life satisfaction ratings of persons with various physical disabilities, including persons with SCI, and a matched sample of nondisabled persons, but both Fuhrer (1994) and Fuhrer et al. note that descriptive statistics were not provided (i.e., mean ratings for the groups), preventing the assessment of trends in the data.

Despite the lack of consensus about whether life satisfaction of persons with SCI is akin to that of non-disabled populations, much research shows that, beyond the first year of SCI, acceptance of disability improves and life satisfaction increases (Decker & Schulz, 1985; Krause & Crewe, 1991; Schulz & Decker, 1985; Woodrich & Patterson, 1983). In other words, regardless of whether life satisfaction of many persons with SCI is higher or lower than that of many nondisabled persons, levels of life satisfaction within the SCI population generally increases beyond the first year post-SCI.

Life Satisfaction and Perceived Control

Studies have demonstrated that perceived control has a strong positive relationship with life satisfaction in non-SCI populations (Cohen-Mansfield, 1990; Peppers, 1976; Searle et al., 1995; Wallhagen, 1993) as well as in SCI populations (Crisp, 1992; Decker & Schulz, 1985; Fuhrer et al., 1992; Schulz & Decker, 1985). In other words, life satisfaction may be influenced by the perception of control that a person has in his or her life and vice versa. Subsequently, adjustment to disability may be influenced according to the impact that perceived control has on life satisfaction.

Depression

The concept of depression is prominent in the literature on adjustment to SCI (Dijkers & Cushman, 1990). Although many studies employ measures of depression to reflect psychological adjustment to SCI (Krause, 1992b), they often fail to describe the behaviours that are being labelled as depression, resulting in a lack of clarity on this issue in SCI research (Trieschmann, 1988). For example, Trieschmann indicates that true depression, characterized by loss of appetite, insomnia, and psychomotor retardation, is not prevalent in the SCI population. Indeed, a number of studies report the incidence of depression post-SCI to be quite low (Cook, 1979; Decker & Schulz, 1985; Richards, 1986; Schulz & Decker, 1985; Stensman, 1994). There is evidence, however, that many persons with SCI experience psychological discomfort or grief which may not be detected by standardised tests on depression (Trieschmann, 1988). For example, Cook (1979) found that averaged scores from the MMPI (Dahlstrom & Welsh, 1960) demonstrated a low incidence of debilitating depression, but after sorting these scores to test for individual differences, Cook found that 42% of the sample experienced feelings

of psychological discomfort that were significantly different from that of the average person (e.g., unhappy, sad, body function concerns). Consequently, the discrepancy between depression and other feelings of psychological discomfort demonstrates the need for a precise use of the term 'depression' in SCI research (Trieschmann, 1988).

Furthermore, Trieschmann argues that since true depression is not prevalent in the SCI population, 'grief' may be a more appropriate term to describe the sadness that many persons may experience after SCI.

While it is clear that depression does not affect most persons after SCI, as once was believed (Dijkers & Cushman, 1990; Hammel, 1992; Krause, 1992), a number of studies show that depression levels post-SCI are higher than that of the general population. For example, persons with SCI in Coyle et al.'s (1994) study scored significantly higher (mean = 13.92) on the Center for Epidemiologic Studies - Depressed Mood Scale (CES-D) (Radloff, 1977) than persons in a non-disabled community sample (mean = 9.25) (Radloff, 1977). In addition, Coyle and associates indicate that about 33% of the participants with SCI were at risk for depressive episodes according to Myers and Weissman's (1980) critical value of 16 on CES-D scores to indicate risk for depression. Similarly, MacDonald et al. (1987) found that 15% of their sample of non-hospitalized persons with SCI were clinically depressed according to the Clinical Depression Measure (CDM) (Breiter et al., 1983) and that another 45% were mildly depressed according to the Beck Depression Inventory (Beck et al., 1979). Six years later, Coyle et al. (1993) found that 21% of participants with SCI who were in treatment for a secondary health problem were at risk for clinical depression according to the CES-D Scale. The rates for depression in these studies, though not remarkably high in and of themselves, are

considerably higher than estimated rates of 5.7% for major and minor depression in the general US population (Weissman, Myers, & Harding, 1978). In addition, a comparison of these studies suggests that risks of depression may be higher for SCI persons with secondary health complications than for SCI persons not experiencing such complications. Regardless, both Coyle et al. (1994) and Coyle et al. (1993) contend that individuals with SCI are at an elevated risk for depressive episodes post-rehabilitation (i.e., after discharge).

Taken together, the mixed findings regarding the incidence of post-SCI depression would seem to suggest that depression is not as prevalent in SCI populations as was once thought, but that it does occur to a certain degree in this population. Indeed, the presence of depression in some persons with SCI cannot be denied (Dijkers & Cushman, 1990; Fuhrer et al., 1992; Whalley Hammell, 1992). Furthermore, evidence that psychological discomfort or grief may exist to a degree that is beyond the average person and that these feelings tend to be overlooked when diagnostic depression test scores are averaged, suggests that terminology and definitions such as depression and grief need clarification. It also underscores the need for research to more clearly "note the variation in incidence of these emotional problems depending on the methodology used to assess these conditions in the various studies" (Trieschmann, 1988, p. 79).

Misconceptions About Post-SCI Depression

Staff attitudes and depression. Cushman and Dijkers (1986) indicate that claims regarding the incidence of depression have been largely based on overestimations made by rehabilitation staff. In fact, the literature regarding staff attitudes toward post-SCI depression has been thoroughly reviewed by Hammel (1992), and this review clearly

indicates that significant discrepancies exist between staff and patient's perceptions of post-SCI psychological status. Whalley Hammell suggests that society's impression of traumatic disability as a tragedy that requires a response of sadness and depression is reflected in attitudes of healthcare personnel. It has even been suggested that rehabilitation staff tend to disregard the hope, optimism, and happiness of persons with SCI, perhaps because staff observations are clouded by expectations that persons should be depressed post-SCI (Cushman & Dijkers, 1986). In fact, Trieschmann (1988) cites anecdotal evidence about a person with SCI who had remarked that the most depressing aspect after SCI was that rehabilitation staff expected him to be depressed. Furthermore, Richards (1986) suggests that professionals may overestimate postdischarge psychological distress and perceive postdischarge adjustment to be unusually difficult perhaps because only the persons with the most severe adjustment problems have come to their attention in the past. As mentioned earlier, Schulz and Decker (1985) recommend the use of standardised measures in testing for depression to avoid the tendency to overestimate its occurrence in SCI populations.

Stage theories and depression. Various investigators suggest that 'stage theories' on adjustment to SCI may have led to misconceptions about depression after SCI (Buckelew et al., 1991; Trieschmann, 1988; Whalley Hammell, 1992). In general, stage theories propose that persons with SCI experience a predictable sequence of emotional reactions that eventually ends at the stage of adjustment (Krause, 1992b). According to these theories, depression is viewed as a natural and necessary reaction that is to be expected and even elicited as part of a normal grieving process to SCI, and persons who do not demonstrate depressive reactions after SCI are perceived as being in denial or being

maladaptive (Buckelew et al., 1991; Whalley Hammell, 1992). Implicit in this theory is that "adjustment as a process would be not complete until the person had experienced depression" (Whalley Hammell, 1992, p. 320). According to Trieschmann (1988), however, recent research shows that persons with SCI who are least depressed function better during rehabilitation and after discharge. Thus, it would appear that depression does not enhance the process of adjustment, but that instead, the absence of depression facilitates adjustment.

Stage theories also propose that time since injury may be related to adjustment to SCI. Specifically, these theories propose that as persons progress towards a final stage of adjustment, less psychological distress (depression) is expected (Buckelew et al., 1991). Empirical support for this assumption is also mixed. While some studies indicate that emotional balance is related to time since injury (Cook, 1982; Lundqvist et al., 1991; Richards, 1986; Woodrich & Patterson, 1983), other studies show that emotional status is not related to time since injury (Buckelew et al., 1991; Cook, 1979; Stensman, 1994).

Depression and Perceived Control

A plethora of literature indicates that perceived control is negatively correlated with depression (Birchwood, Mason, MacMillan, & Healy, 1993; Crisp, 1992; Decker & Schulz, 1985; Devins et al., 1986; Morris, Morris, & Britton, 1989; Schulz & Decker, 1985; Schulz, Tompkins, Wood, & Decker, 1987; Wallhagen, 1993). Seligman (1975) offers a possible explanation for this relationship. He suggests (based on his model of learned helplessness) that feelings of helplessness result when a person believes or has learned over time that he or she has a loss of control over reinforcers in his or her life (see section 'Perceived Control' on p. 35 of this proposal for further discussion), and that

depressed individuals typically attribute events to a sense of helplessness and lack of control. Seligman stresses that the pivotal factor in depression, however, is one's 'belief' of inability to control reinforcers. In other words, if an individual does not perceive that he or she has control over a situation (i.e., reinforcers), then feelings of helplessness may lead to depression. Since a loss of perceived control is often associated with SCI (Decker & Schulz, 1985; Trieschmann, 1988), persons with SCI may be at risk of experiencing depression. This stresses the need for rehabilitation strategies and environmental or societal initiatives that facilitate the development of feelings of personal control of persons with SCI.

Leisure and Adjustment to Disability

The term 'leisure' has been conceptualized and defined in a number of ways. According to Godbey (1990), leisure descriptions can be categorized into four basic contexts: leisure as free time, leisure as activity, leisure as a state of existence, or leisure as a state of mind. Horna (1994) adds that freedom of choice and individual perceptions are key notions within conceptualizations of leisure. She proposes the following definition of leisure.

Leisure is an enjoyable experience in which people choose to participate with relative freedom in terms of discretionary time and particular activities, within the context and limitations of culture, socio-economic factors, and gender.

Leisure experience can be objective and/or subjective, long-lasting or brief, planned or spontaneous, an end in itself or therapeutic/compensatory, sociable or solitary (Horna, 1994, p. 47).

Godbey also states that recreation is sometimes used interchangeably with leisure, but is often used in a more specific and limited way. As such, recreation can occur during leisure, but the two terms are not synonymous.

Lee et al. (1993) state that little is known about the relationship between leisure and adjustment to disability and, in particular, the role of leisure in the course of adjustment. Despite the dearth of information in this field, several studies show that postdischarge psychological adjustment to SCI is positively influenced by participation in activities (Cook, 1982; Gordon, 1982, MacDonald et al., 1987). In addition, a study which explored the role of therapeutic recreation (TR) in the rehabilitation of persons with SCI found that TR (including leisure education classes and group leisure outings) had many positive effects, including the facilitation of coping and adjustment to disability (i.e., dealing with apprehension about going out, accepting the reality of disability, and gaining strength), and community reintegration (i.e., preparing persons to cope with their lives upon discharge) (Caldwell et al., 1994/95). The above findings are not surprising since "participation in leisure activities provides a source of satisfaction for a wide range of psychological needs" (Tinsley, 1984, p. 127). Given that well-being and adjustment are related constructs (Graney & Graney, 1973), evidence that describes how leisure contributes to psychological well-being may also provide insight into how leisure may enhance psychological adjustment to disability. Some of the ways in which leisure may contribute to psychological adjustment to disability are discussed below.

Leisure and Perceived Control

Iso-Ahola (1994) indicates that the essence of leisure is perceived freedom (i.e., free choice). Deci and Ryan (1987) suggest that situations which involve freedom facilitate

the development of a sense of control. This assertion is supported by studies which have shown that provision of choice can positively affect perceptions of control (Langer & Rodin, 1976; Mactavish & Searle, 1992; Rodin & Langer, 1977). Leisure, then, may help to develop a sense of personal control by the freedom of choice that is inherent to it. Indeed, leisure (through perceived freedom) involves "the exercise of personal control over one's behavior and environment" (Iso-Ahola, 1994, p. 53). Perceived control, therefore, is one characteristic of leisure.

Personal control is also a key element of self-determination (Coleman & Iso-Ahola, 1993). Iso-Ahola (1994) indicates that self-determined persons feel in control of their lives. Furthermore, Coleman and Iso-Ahola indicate that self-determination disposition is cumulatively developed through opportunities to actively exercise choice in leisure (perceived freedom) and through opportunities to experience personal control in leisure. Leisure, then, fosters not only perceptions of control, but also the development of self-determination. Self-determination, in turn, has been linked with psychological well-being (Deci, 1980; Langer & Rodin, 1979), resistance to illness (Deci & Ryan, 1987), and with the ability to cope with stressful life events (Coleman & Iso-Ahola, 1993; Iso-Ahola, 1994). Given that leisure is linked with self-determination through perceived control, and that self-determination is linked with psychological and physical health, leisure may facilitate adjustment to disability through opportunities to exercise personal control and self-determination.

Perceived Control and Perceived Leisure Control

The literature indicates that locus of control can relate to one's environment in general (Iso-Ahola, 1980) or that it may be domain specific. For example, Buckelew et al.

(1991) measured participants' health locus of control in their study on adjustment to SCI of two samples admitted to rehabilitation at different times (i.e., 1981 - 1982; 1984 - 1986). Using the Multidimensional Health Locus of Control scales (MHLC) (Wallston et al., 1978), health locus of control was assessed according to internal health locus of control beliefs, powerful others health locus of control beliefs, and chance health locus of control beliefs. Buckelew et al. found that within each sample, MHLC scores were non-significant for age and time since injury, indicating that age and time since injury were not related to locus of control (i.e., health beliefs).

Locus of control also has been assessed in relation to the domain of leisure. Both Searle et al. (1995) and Searle and Mahon (1991) measured perceived leisure control in their studies on leisure education and older adults. These researchers described perceived leisure control as the degree to which participants believed they controlled events and outcomes in their leisure experiences. An examination of these studies reveals a need for further research on perceived leisure control, and about whether leisure interventions that foster this domain-specific control also can effect a more generalised sense of control. For example, Searle and Mahon found that leisure education had no significant impact on perceived leisure control of older adults, and Searle et al., using the same measurement scale, found that a different leisure education program positively effected participants' perceived leisure control. This positive effect, however, did not extend to a generalised sense of personal control. Interestingly, Bedini et al. (1993) found that leisure education had a significant positive effect on perceived control of persons with mental retardation. Given these mixed findings, future studies that examine the relationship between leisure and perceived control should include assessments of perceived leisure control as well.

Furthermore, it would be interesting to determine whether leisure interventions can effect both perceived leisure control and personal control in studies that examine leisure and adjustment to disability.

Leisure and Life Satisfaction

Leisure has contributed to the psychological well-being of persons by increasing their life satisfaction. In fact, Tinsley (1984, p. 135) states "Scholars have long argued that participation in leisure activities has salutary effects on the...mental health and life satisfaction of the individual". For example, Riddick (1985) found that older persons who were more active in their leisure pursuits were more likely to experience greater life satisfaction than inactive persons. Ragheb and Griffith (1982) also found that frequency of leisure participation was related to higher life satisfaction scores of older adults. Peppers (1976), who studied adjustment to retirement, found that leisure participation in social and/or physical activities as opposed to sedentary and isolate activities, and that participation in favourite activities contributed to high life satisfaction. Making choices based on leisure activity preferences, however, was a more important predictor of life satisfaction in this study, and reinforces the critical role that perceived control in leisure may have in life satisfaction.

Additional research has demonstrated the contribution of leisure to life satisfaction of persons with SCI. For example, Coyle et al. (1993) examined leisure involvement and satisfaction of 48 adults with SCI who were experiencing secondary medical complications and found that persons who reported that they maintained or increased their personal, family, and social leisure had higher levels of life satisfaction. Coyle et al. suggest that leisure activities can facilitate the achievement of higher-order needs in

Maslow's (1970) hierarchy (i.e., self-esteem, belongingness, and self-actualization), and that these needs must be met in order to experience greater life satisfaction. They surmise that if leisure can help individuals with SCI "build purpose back into their lives, thereby satisfying higher-order needs....then the importance of leisure in the rehabilitation process is apparent" (Coyle et al., 1994, p. 107).

Coyle et al. (1994) also indicate that many quality of life studies (e.g., Crewe, 1980; Crewe & Krause, 1990; DeVivo & Richards, 1992) have found that leisure contributes to the life satisfaction of persons with SCI, yet they have neglected to discuss such findings in any detail. Coyle et al. argue that the significance of leisure in the lives of persons with disabilities is often overlooked because of the predominant work ethic in Western society, and also because inpatient rehabilitation goals still favour tasks related to physical functioning over quality of life issues. This points to the need for future quality of life research to highlight any demonstrated relationship between leisure and life satisfaction of persons with SCI.

Life Satisfaction and Leisure Satisfaction

One important way that leisure may be linked to life satisfaction is through leisure satisfaction. Leisure satisfaction has been described as "the quality of leisure participation" and as "meaningful leisure experiences" (Ragheb & Griffith, 1982). It results, in part, from engaging in chosen activities (Iso-Ahola, 1980). For example, Ragheb and Griffith (1982) found that increased leisure participation was directly related to leisure satisfaction of older adults. They also found that leisure participation was directly related to life satisfaction, and that leisure satisfaction was directly related to life satisfaction. These findings are not surprising, since leisure satisfaction is a component of

life satisfaction (Sneegas, 1986). In fact, research shows that leisure satisfaction plays a very important role in life satisfaction. Ragheb and Griffith found that leisure satisfaction was a better determinant of life satisfaction than frequency of leisure participation. Similarly, Ragheb (1993) found that leisure satisfaction accounted for greater perceived wellness in adults than did leisure participation. Studies on persons with physical disabilities provide further support for the impact of leisure satisfaction on life satisfaction. For example, Kinney and Coyle (1992) examined predictors of life satisfaction in adults with physical disabilities and found that leisure satisfaction accounted for 42% of the variance in life satisfaction scores. Coyle et al. (1994) further analysed Kinney and Coyle's research to determine the contribution of leisure satisfaction to life satisfaction among persons with SCI, and found that leisure satisfaction accounted for 43% of the variance in life satisfaction scores in this population.

Although leisure satisfaction is a significant factor in the life satisfaction of persons with SCI, Lee et al. (1993) indicate that leisure is a problematic area for many persons with SCI. For example, Fuhrer et al. (1992) found that recreation activities ranked fourth out of twelve domains in which persons with SCI were most dissatisfied. Similarly, Dew et al. (1983) found that although almost two-thirds of individuals with SCI in their sample described their current use of time as satisfying, participants reported that they engaged in most activities less often post-SCI than they did before their injury. Many of these participants reported that they would have benefitted from having more recreation activities during their hospitalization.

Taken together, the above findings suggest that the leisure satisfaction of persons with SCI needs to be addressed if they are to experience greater life satisfaction. In

addition, evidence that individuals recently discharged from rehabilitation usually have more time available for recreation and leisure (Bullock & Howe, 1991), that "the mental health of adults is dramatically influenced by the amount of satisfaction an individual receives from his/her leisure activities" (Riddick 1986, p. 259), and that leisure satisfaction is negatively related to loneliness and positively associated with adjustment to disability (Lyons, 1987) further points to the need to address the leisure satisfaction of persons who sustain SCI. Coyle et al. (1994) recommend that leisure satisfaction should be addressed some time during the SCI rehabilitation process. Finally, the suggestion that perceived control and reciprocity are important characteristics which can be facilitated through leisure participation, and can thereby enhance leisure and life satisfaction (Purcell & Keller, 1989) implies that perceived control in leisure may contribute to adjustment to disability by its effect on leisure satisfaction.

Leisure and Depression

According to Patrick (1994, p. 187), "leisure is both an experience and a state of mind which has properties usable in treating depression". He particularly discusses the value of leisure in rekindling the 'ability to enjoy' in order to overcome the 'spiral of hopelessness' experienced by depressed individuals. Leisure, therefore, may mediate in the reduction and prevention of depression among persons with SCI. Several studies provide support for this claim. Coyle et al. (1993) examined leisure and satisfaction levels of persons with SCI who were experiencing secondary medical complications and found that persons who maintained or increased their personal, family, and social leisure reported fewer depressive symptoms. Both Gordon (1982) and MacDonald et al. (1987) studied the relationship between activity level and depression in a community sample of

persons with SCI and found that depression was negatively correlated with levels of activity behaviour. Gordon found that the amount of time spent in activity and the frequency of activity (social activity, outside activity, socializing) were each negatively correlated with MMPI (Dahlstrom & Welsh, 1960) depression scores. In addition, he found that depression scores were positively correlated with inactivity and watching television. These correlations, however, do not imply causation in one direction or another. In fact, the nature of the relationship between depression and activity may be reciprocal. For example, Siosteen et al. (1990) found that while persons with SCI who were free of depression and highly satisfied with their lives were more likely to participate in social activities, higher activity levels seemed to improve mental well-being. A possible explanation for this relationship may be derived from the work of Noreau and Shephard (1995) which indicates that wheelchair athletes tend to be better adjusted than nonathletic peers with SCI, and that active leisure and social activity contribute to psychological health as well. They state that "an individual's emotional state is substantially disturbed following SCI and in such people exercise is thus likely to improve mood state....the resulting sense of well-being and psychological health facilitates the process of coping with SCI" (Noreau & Shephard, 1995, p. 242). They question, however, whether inherent personality traits may favour participation in sport and this sense of well-being instead. In other words, it is possible that the reciprocal relationship between depression and activity level may exist because physical and social activities facilitate psychological health, and because positive personality traits (e.g., internal locus of control) which are reflected in psychological health (e.g., life satisfaction, absence of depression), lead to participation in activities.

In sum, there is sufficient evidence that leisure activity (including active recreation and socializing) may help to reduce or prevent depression of persons with SCI. Since persons with SCI have an increased risk of experiencing post-discharge depression (Coyle et al., 1994; Coyle et al., 1993), the leisure needs of persons with SCI should be addressed in order to decrease existing or potential depressive episodes, which should result in the facilitation of adjustment to disability.

Leisure Education

The contributions of leisure to psychological well-being, and thereby adjustment to disability have been described in the previous sections. Since it is apparent that the leisure needs of some persons with SCI need to be addressed, interventions that facilitate the achievement of these leisure needs must be employed. The following sections discuss the potential role of leisure education in facilitating the leisure of persons with SCI. In particular, it describes the concept and purpose of leisure education, highlights a selection of leisure education models that have been developed and used in research, and then delineates how leisure education may address the leisure needs and facilitate adjustment to disability of persons with SCI who are re-entering the community.

Leisure education is a process whereby individuals learn to improve the quality of their lives through leisure (Aguilar, 1985; Gunn & Peterson, 1977; Mundy & Odum, 1979). It has been conceptualized as an educational process that is designed to develop one's leisure lifestyle (Chinn & Joswiak, 1981). Bullock and Mahon (1997) argue that leisure education not only develops leisure lifestyle, but also impacts total lifestyle. They define leisure education as "an individualized and contextualized educational process

through which a person develops an understanding of self and leisure and identifies and learns the cluster of skills necessary to participate in freely chosen activities which lead to an optimally satisfying life" (Bullock & Mahon, 1997, p. 381). Similarly, Dattilo and Murphy (1991) suggest that the purpose of leisure education is to facilitate freely chosen recreation participation and to enhance life satisfaction. They also indicate that leisure education is most commonly associated with the provision of therapeutic recreation services and, therefore, most often applied to services for persons with disabilities. For example, Peterson and Gunn (1984) view leisure education as a phase in the total continuum of therapeutic recreation services which focuses on the acquisition of leisure skills, attitudes, and knowledge in order to facilitate independent leisure participation. Caldwell and Smith (1988) indicate that not all persons have the opportunity to experience leisure, due to attitudinal, situational or physical limitations, and so strategies such as leisure education are developed to enable persons with these limitations to experience leisure. Leisure education, however, can be applied to all individuals regardless of whether they have illness or disability (Dunn, 1981; Mundy & Odum, 1979).

Leisure education programs often vary in content, population, and duration. They may focus on several educational components or address a single educational component (Chinn & Joswiak, 1981). Furthermore, they have occurred in a variety of settings including specialized environments and generic settings, and have been delivered in small-group discussions or through individualized programs (Mundy & Odum, 1979). Some authors suggest that the leisure education process should be tailored to individual needs, given that leisure is a highly personal construct (Bullock & Mahon, 1997; Dunn,

1981). Bullock and Mahon also suggest that the unique needs of an individual should determine not only the number of components addressed, but also the order in which these components are introduced. Therefore, a group of individuals may not need to proceed through similar steps, nor may individuals all need to proceed through steps in the same prescribed order.

The literature describes various leisure education models and programs that have been studied across a range of populations and settings. The following section focuses on leisure education models that have been studied in relation to persons with physical disabilities. This is followed by a review of studies on leisure education, according to outcomes that reflect psychological well-being, which may be relevant to adjustment to disability.

Leisure Education and Persons with Physical Disabilities

Bullock and Howe (1991) developed and delivered the Community Reintegration Program (CRP) leisure education model in order to help persons with physical disabilities acquire the awareness, skills, and knowledge that are needed for the greatest possible degree of independent leisure functioning in the community environment. The CRP model consists of twelve units which focus on self-awareness in leisure, activity and skill analysis, barriers and activity adaptations, leisure planning, and leisure resources. Recreation activity participation is an essential component in this program. Bullock and Howe followed 7 persons with physical disabilities (ranging from SCI to progressive neuromuscular diseases) who were recently discharged from rehabilitation hospital into their home/community. Using both quantitative and qualitative data in a case study design, the researchers found recreation participation, social interaction, self-concept,

initiative, and positive affect towards the future were all positively effected. They conclude that "improved behavioral functioning, adjustment to disability, autonomy, and enhanced quality of life (were) evident in the subjects" (Bullock & Howe, 1991, p. 16), and that the CRP was an effective therapeutic recreation reintegration program.

Zoerink (1988) used values clarification techniques in a 6 week group leisure education program for four young people with spina bifida and measured their leisure functioning, using The Leisure Diagnostic Battery, Long Form, Version A (Witt & Ellis, 1987). Program components consisted of (a) identifying our recreation, (b) benefits and alternatives, (c) leisure patterns and priorities, (e) focus on change, (f) overcoming barriers, and (g) planning for the future. Each session was about 90 minutes in duration. Participants also engaged in planned recreation activities following each session. Results from pre- and post-test measures using a single subject research design indicated that there were no systematic changes in perceived competence, perceived control, leisure needs, depth of involvement, playfulness, personal and motivational barriers, knowledge of leisure opportunities or preferences. Zoerink concluded that the program may not have been intense or long enough, and recommended that future programs should consider whether program content is suitable to participant skill levels, and to evaluate intervention strategies, program environment, and measurement methods which may unsuitable to the program's goals.

Zoerink and Lauener (1991) used values clarification strategies to determine the effects of an 8 week leisure education program on leisure attitude, leisure satisfaction, and perceived freedom of 12 adults with traumatic brain injury who attended a day hospital program. Each of the eight leisure education session were 90 minutes in

duration. The program consisted of identifying enjoyable recreation experiences, choosing from alternatives and examining choices made, examining and publicly affirming the range of alternatives associated with different activities, exploring and judging past events, building a consistent action pattern, examining benefits and alternatives, removing barriers to action, and planning for the future. A community outing followed each session. A control group participated in an informal discussion group and reality-orientation based activities within the institution. Findings showed that both the leisure education group and the discussion group had improvements in the psychological, educational, relaxation, and aesthetic factors of leisure satisfaction. Additionally, participants in both groups showed greater perceptions of freedom in leisure, but the changes on pre-to post-test measures were nonsignificant. Furthermore, informal observations that were not a formal part of the study noted increased leisure awareness and psychosocial adjustment of persons in the leisure education group. Specifically, "the subjects seemed better able to adapt and appropriately respond to the many social barriers with which they were confronted while using community resources" (Zoerink & Lauener, 1991, p. 26). Contrary to expectations, the leisure education group showed a decreased desire for leisure time and spontaneous enjoyment in leisure at the end of the program. The researchers suggest that participants may have experienced too much free times in the day hospital and, therefore, may have felt bored. Overall, they conclude that using both the leisure education program and the informal discussion groups had a modest effect in increasing perceived freedom and leisure satisfaction of persons with brain injury.

Caldwell, Adolph, and Gilbert (1989) examined the effects of leisure counselling on leisure involvement of 155 persons with head injury after discharge from hospital. The leisure education model consisted of (a) skill development, (b) community orientation, (c) leisure counselling, and (d) resource information. The leisure counselling program focused on leisure attitudes, values, needs and interests, leisure barriers and ways to overcome them, and leisure action planning. The general recreation programs were designed to develop leisure skills and offer leisure enjoyment while hospitalized. Participants who received leisure counselling indicated that they felt better prepared to deal with their free time after discharge, but also reported increased leisure boredom and leisure dissatisfaction than persons from a control group. Caldwell and associates suggest that participants may have had higher expectations about what they could do after discharge or about what leisure opportunities were available in the community. They also query whether the leisure attitudes and skills developed in the hospital did not transfer to the community environment. The researchers recommend, therefore, that leisure education programs should not only prepare persons for positive leisure opportunities post-discharge, but also should prepare persons for possible impediments to such leisure experiences.

Caldwell et al. (1994/95) conducted an interpretive study about the role and significance of therapeutic recreation (TR) during the rehabilitation of 20 persons with SCI. Interview data were collected both during hospitalization (about 1 month pre-discharge) and any time from 3 weeks to 5 months following return to the community. The TR services were provided on both an individualized and group basis and included "leisure education classes, outings, sport and fitness programs, cultural arts programs, and

horticulture programs" (Caldwell et al, 1994/95, p. 14). Unfortunately, the leisure education program components were not identified by the authors. The findings revealed several themes regarding the role of TR: (a) provided hope and a sense of future possibilities; (b) provided information, education, and adaptive resources; (c) facilitated skill development; (d) encouraged and motivated; (e) developed confidence; (f) provided aspects of leisure experience (i.e., opportunities for choice, enjoyment, fun and diversion; living life to its fullest); (g) assisted in coping and adjustment to disability (ie., dealing with apprehension about going out, accepting the reality of disability; gaining strength), and; (h) facilitated community reintegration. The researchers suggest that TR was valuable to the rehabilitation of persons with SCI, and that the leisure outings were particularly important in this process.

There also were some negative feelings expressed by participants, particularly during post-discharge interviews. Caldwell et al. (1994/95, p. 23) comment that TR made adjustment more difficult for some; that "while TR provided and facilitated a supportive comfortable, and non-stigmatized environment, this therapeutic milieu was not generally available in the community". In other words, the leisure outings allowed participants to practice new skills, but participants were still benefiting from the company of others with SCI and the therapist during these community-based outings. The researchers conclude that the skills and attitudes learned in the therapeutic milieu may not have been transferred to the community environment after discharge. Recommendations include systematically helping individuals to generalize newly acquired skills to the community setting, and addressing systemic issues such as staff limitations (e.g., unfamiliarity of what it is like to 'live' in a wheelchair) and a lack of social support in community-based

leisure. Interestingly, it is within the realm of leisure education to provide opportunities to generalize skills learned in a therapeutic setting to the community and also to prepare individuals for potential barriers that might be expected and predicted in the 'real' world. Furthermore, leisure education should be a contextualized process (Bullock & Mahon, 1997). It is likely to be more effective, therefore, if delivered in the context of a person's home and community environment rather than solely during the pre-discharge phase of rehabilitation.

Leisure Education and Outcomes Related to Psychological Well-being

Searle and Mahon (1991) designed an 8 week leisure education program, based on Mundy and Odum's (1979) Scope and Sequence Model of leisure and the work of the Ontario Ministry of Culture and Recreation (1978), in order to determine its effects on perceived psychological well-being (i.e., perceived leisure control, perceived leisure competence, and self-esteem) among older adults in a day hospital. The program consisted of (a) exploration of the definition of leisure and of personal leisure, (b) assessing personal leisure needs and the role of leisure in participants' lives and in lives of people around them, (c) identifying leisure constraints and their solutions, (d) examining leisure preferences, (e) leisure goal setting, (f) identifying community leisure resources, (f) examining decision-making strategies in leisure, and (g) developing a leisure action plan and articulating follow-through plans for leisure participation. The investigators found that only perceived leisure competence was positively affected by the leisure education program, whereas both perceived leisure control and self-esteem findings were not statistically significant on pre- and post-test measures. They conclude that although the leisure education program had a short-term improvement on the psychological well-

being of participants, it should have incorporated active decision-making, action planning, and follow-through of action plans (i.e., recreation participation) in order to affect perceived leisure control. Other recommendations included increasing either the length of the program or the number of weekly sessions, and slowly fade the program when ending it. In a three month follow-up, Searle and Mahon (1993) found that perceived leisure competence of participants continued to improve, and therefore, concluded that the leisure education program had a longer term impact on participants' psychological well-being.

Shortly after, Mahon and Searle (1994) utilized the same leisure education model that was described in their reports of 1991 and 1993, to determine its effect on psychological well-being (measured by leisure satisfaction and life satisfaction) and leisure participation of older adults in a day hospital. Contrary to their 1991 study, the investigators incorporated leisure participation into the program. The 8 week program was delivered individually. Findings demonstrated that the leisure education program positively affected the short-term leisure participation and life satisfaction of the participants, but these gains were not sustained three months after the end of the program. Additionally, the leisure education program did not increase the short- or long-term leisure satisfaction of the participants. The researchers conclude that demonstrating outcomes of leisure education is not sufficient, but that research needs to determine what aspects of a leisure education program result in outcomes such as changes in life satisfaction and locus of control. They indicate that leisure education participation must be logically related to the intervention itself and that this knowledge will help in the development of valid leisure education interventions.

In a field experiment with a sample of elderly subjects, Searle et al. (1995) modified and employed the Bullock and Howe (1991) Community Reintegration Program (CRP) leisure education model to increase perceived leisure control and perceived leisure competence, thereby enhancing an individual's life satisfaction (psychological well-being) and independent living. Recreation activity participation was an essential component in this program. The leisure education intervention was delivered individually and participants proceeded at their own pace, with an average of 17 weeks spent in the program (range = 14 to 25 weeks). Searle and associates found that the intervention increased subjects' perceived leisure competence and perceived leisure control, which the authors state are two precursors to independent living. There was also an increase in life satisfaction and a decrease in leisure boredom, and therefore, an improvement in psychological well-being. The researchers conclude that the provision of choice in recreation participation may account for the significant positive effect on perceived leisure control in this study. To assist in the generalization of perceptions of control, however, they recommend that leisure education programs should incorporate instructions to participants about ways to take greater control in other areas of life.

Another leisure education model that was designed to facilitate independent living is Bullock and Luken's (1994) Reintegration Through Recreation (RTR) program. This individualized and consumer-oriented psychosocial leisure education program was designed to enhance a sense of personal control and competence of persons with severe and persistent mental illness, and to facilitate the transition of skills to their community. The program was based on problem identification and self-selected goals and consisted of (a) leisure awareness, (b) self-monitoring behaviour contracts, (c) problem-solving skills,

(d) activity mastery planning skills, (e) leisure resources, and (f) future plans. The authors presented a brief case study which demonstrates how RTR helped a woman to achieve (a) continued and persistent participation in selected community activity, (b) increased social connections, (c) improved money management and transportation skills, (d) increased self-esteem, and (e) no rehospitalizations. In a social validation study of RTR, Mahon, Bullock, Luken, and Martens (1996) interviewed consumers, family members, and service providers about the social importance and appropriateness of RTR's goals, interventions, and outcomes. Findings indicated that (a) the person-centred goals of increasing self-confidence and identifying personal recreation interests were most highly rated, (b) skill rehearsal was the most highly rated intervention strategy, although behavioral contracting and self-monitoring were also important, and (c) the average group satisfaction score was quite high. The researchers suggest that self-determination and personal autonomy are important goals for persons with severe and persistent illness. They also stress that leisure education programs "must go beyond the first step of leisure awareness and progress to developing the abilities and confidence to take action..." (Mahon et al., 1996, p. 210). They suggest that skill acquisition, application and follow through must occur in order for rehabilitation successes to last.

Bedini et al. (1993) also demonstrated that leisure education enhances aspects of psychological well-being. They collected both quantitative and qualitative data to study the effect of leisure education on the transition of students with mental retardation from secondary school to adult life. Students in the experimental group participated in a weekly program in their school during the course of the school year (September to June). A control group did not partake in the leisure education program. The leisure education

sessions consisted of (a) leisure awareness, (b) self-awareness in leisure, (c) leisure opportunities, (d) community resources, (e) barriers, (f) personal resources, (g) planning, (h) planning an outing, (i) the outing, and (j) evaluation. The researchers found that the leisure education program enhanced leisure competence, perceived control, life satisfaction, self-esteem, communication, social skills, and feelings about leisure and about life. The control group showed improvements in competence, perceived control, and life satisfaction. Improvements in identification of and participation in leisure activities were noted only in the experimental group. Furthermore, qualitative data suggested that the leisure education program had a positive effect on leisure attitudes and behaviour (e.g., leisure awareness and participation).

More recently, Mahon and Martens (1996) found that leisure education enhanced the leisure satisfaction and community adjustment in the areas of recreation and leisure and friendships of persons with developmental disabilities who were moving from school to work environments. The leisure education program was based on the School-Community Leisure Link Leisure Education Curriculum (SCLL) (Bullock, Morris, Mahon, & Jones, 1992) which "was designed to facilitate the independent leisure functioning of students living with disabilities in their home communities" (Mahon & Martens, 1996, p. 291). The SCLL program consisted of six components: (a) leisure awareness, (b) leisure resources, (c) leisure communication skills, (d) making decisions, (e) leisure planning, and (f) activity skill instruction. This intervention was delivered individually on a weekly basis and required a mean of 25.5 sessions (range = 15 to 33 sessions).

In sum, the literature on leisure education demonstrates that leisure education contributes to psychological well-being of persons with disabilities. Some of the most relevant findings have been increases in leisure satisfaction (Mahon & Martens, 1996; Zoerink & Lauener, 1991), life satisfaction (Bedini et al., 1993; Mahon & Searle, 1994; Searle et al., 1995), perceived leisure control (Searle et al., 1995), perceived control (Bedini et al., 1993), perceived freedom (Zoerink & Lauener, 1991), perceived leisure competence (Bedini et al., 1993; Searle & Mahon, 1991, 1993; Searle et al., 1995), self-esteem (Bullock & Luken, 1994), autonomy (Bullock & Howe, 1991), facilitation of independent living (Bullock & Howe, 1991; Bullock & Luken, 1994, Searle et al., 1995), community adjustment (Mahon & Martens, 1996;), psychosocial adjustment (Zoerink & Lauener, 1991), community reintegration and adjustment to disability (Bullock & Howe, 1991; Caldwell et al., 1994/95), and a decrease leisure boredom (Searle et al., 1995). Leisure education also has had some undesirable effects including no change in perceived leisure control, self-esteem (Searle & Mahon, 1991), perceived control (Searle et al., 1995), and leisure satisfaction (Mahon & Searle, 1994), and increases in leisure dissatisfaction and leisure boredom (Caldwell et al., 1989). These studies offer potential reasons for the undesirable effects and recommend ways to try to prevent such effects in future studies.

Leisure Education and Adjustment to Disability

As indicated earlier, a universal feature of leisure education is its overall goal of improving quality of life through leisure. Since adjustment to disability has been recognized as an indicator of quality of life (Cushman & Hassett, 1992), it might be

expected that leisure education could facilitate adjustment to disability of persons following SCI. Trieschmann (1988, p. 6) indicates that although 20 to 30 of every 100 persons with SCI have such outstanding personal resources and environmental supports that they require little professional help in adjusting to their disability, "the remainder could benefit from some rehabilitation training that focuses on integration into the community and long-term living with the disability". Since leisure education has been recognized as a transitional community reintegration strategy that concerns the adjustment and functioning of the client within the community into which he or she is returning (Bullock & Howe, 1991), it would appear that leisure education interventions could facilitate adjustment to disability.

The research of Bullock and Howe (1991) and the exploratory research of Caldwell et al. (1994/95) provide some initial qualitative evidence that therapeutic recreation (including leisure education) plays a valuable role in the adjustment to disability of persons with SCI. Further evidence may be found in specific indicators which link adjustment to disability and components of leisure. For example, perceived control and perceived leisure control, leisure satisfaction and life satisfaction, and depression are aspects of psychological well-being which may serve as important linkages between leisure education and adjustment to disability. These avenues are explored below, followed by explanations about how community reintegration can be facilitated through leisure education, and about the appropriate timing of leisure education services in SCI rehabilitation.

How Leisure Education Can Effect Perceived Control and Perceived Leisure Control

Leisure education has the potential to enhance adjustment to SCI through the development of perceived control of persons with SCI. Trieschmann (1988) suggests that persons with SCI who believe they have control of their world and plan to take charge of life have an internal locus of control. She also believes that locus of control measures are likely relevant to behaviours reflective of adjustment to disability. Not surprisingly, leisure education has been recognized as a mechanism for increasing a sense of personal control (Bullock & Howe, 1991, Bullock & Luken, 1994; Dattilo & Murphy, 1991), and has enhanced the personal control of persons with mental retardation (Bedini et al., 1993) and the perceived leisure control of older adults (Searle et al., 1995). Whalley Hammell (1992, p. 324) states that since "the 'activated' patient is one who asserts early control over his environment", health care professionals should encourage goal choices by persons with SCI. During leisure education, a sense of control may be promoted through client-centred goal setting exercises. Similarly, Keller (1981) indicates that obtaining participants' input in planning, implementing, and evaluating leisure activities fosters feelings of control. Bozzacco (1990), too, suggests that individuals who demonstrate feelings of powerlessness should be encouraged to actively engage in decision making; that rehabilitation personnel should involve persons with SCI in making choices. Such procedures are practised in leisure education. Furthermore, Purcell and Keller (1989) suggest that activity analysis (whereby leisure activities are systematically broken down into its component parts/skills) help determine appropriate activities for participants, thereby enhancing feelings of control and reducing feelings of helplessness. Activity analysis, too, is an integral part of some leisure education programs, including Bullock

and Howe's (1991) model. Also, the freedom to make choices in leisure activities likely explains how leisure education facilitates a strong sense of control (Searle et al., 1995). Leisure education, then, may foster both a sense of personal control in leisure and a generalised sense of personal control of persons with SCI. Since perceived control is positively associated with life satisfaction and the absence of depression (Crisp, 1992; Decker & Schulz, 1985; Schulz & Decker, 1985), leisure education may contribute to adjustment to disability by affecting life satisfaction and depression in this manner.

Further support for the potential role of leisure education in facilitating adjustment to disability comes from Cushman and Hassett (1992), who found that persons with SCI mentioned psychological factors including attitude, motivation, and confidence as promoters of independence. Independence relates to the psychological concept of internal locus of control, which, in turn, is reflective of adjustment to disability (Trieschmann, 1988). Many leisure education programs focus on the enhancement of independent living by facilitating personal control and competence (Bullock & Howe, 1991, Bullock & Luken, 1994). It is reasonable, however, that the 'psychological resources' of attitude, motivation and confidence might subsume personal control and competence. For example, perceived control requires a belief or attitude that one has control over life situations. Coleman and Iso-Ahola (1993, pp. 120-121) link intrinsic motivation with personal control, stating that "activities that induce higher levels of perceived freedom and intrinsic motivation are more likely to help people maintain a sense of internal control". It is also logical that confidence might be related to both personal control and competence. Cushman and Hassett stress the need to find interventions which facilitate the development of psychological and psychosocial resources (e.g., gaining confidence),

thereby enhancing independence of persons after SCI. Leisure education provides opportunities to develop confidence by practising leisure skills, developing healthy leisure attitudes through self-awareness and leisure awareness exercises, and participating in intrinsically rewarding leisure activities. Consequently, leisure education programs may also enhance adjustment to disability by facilitating personal control in this more indirect way.

How Leisure Education Can Effect Leisure Satisfaction and Life Satisfaction

Lee et al. (1993, p. 201) state that "the development of a meaningful leisure lifestyle facilitates a successful transition to integrated circumstances and helps to establish a satisfying life". According to Ragheb and Griffith (1982), leisure education is one process that can facilitate meaningful leisure experiences (i.e., leisure satisfaction). In support of this claim, a number of studies have demonstrated the positive effect of leisure education on leisure satisfaction (Mahon & Martens, 1996; Zoerink & Lauener, 1991). Riddick (1986), who found that knowledge of the value of leisure in one's life, awareness of one's leisure-related skills and abilities (e.g., social skills), and awareness of how to identify and use leisure resources were significant precursors to the leisure satisfaction of adults, recommends the use of leisure counselling strategies which assess and examine a client's leisure values and knowledge of community resources. Coyle et al. (1994) similarly recommend that if persons with SCI are to gain the attitudes and skills that are required for leisure satisfaction, leisure education services should be provided after discharge on an out-patient, in-home visit, or day program basis. Additionally, several studies have demonstrated the positive impact of leisure education on life satisfaction (Bedini et al., 1993; Mahon & Searle, 1994; Searle et al., 1995). Indeed,

"leisure education has the capacity to enhance both life and leisure satisfaction" (Bullock & Mahon, 1997, p. 383). Given that (a) leisure education can enhance both leisure and life satisfaction, (b) leisure satisfaction contributes to life satisfaction (Coyle et al., 1994; Ragheb & Griffith, 1982; Sneegas, 1986), and (c) life satisfaction has been used as an indicator of adjustment to disability of persons with SCI (Crisp, 1992; Decker & Schulz, 1985; Schulz & Decker, 1985), leisure education may contribute to adjustment to disability by enhancing both leisure and life satisfaction.

How Leisure Education Can Effect Depression

Only one study that investigated the effect of leisure education on depression was found. Using a multiple baseline design across participants, Dunn (1995) assessed the emotional well-being (i.e., depression, boredom, and loneliness) of two older women who were home-centered, but found that her 8 week leisure education program had no effect on any of the measures of emotional well-being. This does not suggest that there is no relationship between leisure education and depression. In fact, leisure education should play a role in effecting depression, since the positive effect of leisure on depression has already been established. In addition, it is plausible that leisure education could contribute to less depression because maintenance of leisure lifestyle has been correlated with less depression of persons with SCI (Coyle et al., 1993), and leisure education helps develop one's leisure lifestyle (Chinn & Joswiak, 1981). This rationale, coupled with the fact that depression has been used as an indicator of adjustment to SCI, suggests that leisure education may contribute to adjustment to disability by positively effecting depression. In addition, evidence that depression is negatively correlated with life satisfaction of persons with SCI (Fuhrer et al., 1992; Siosteen et al., 1990) suggests that if

leisure education can enhance life satisfaction, then it might simultaneously decrease levels of depression among persons with SCI. Clearly, there is a need for more research on this topic.

How Leisure Education Can Facilitate Community Reintegration

Whalley Hammell (1992) indicates that in order to help people with SCI achieve a meaningful life, rehabilitation needs to focus not just on physical skills and skills in activities of daily living, but on other skills that include creative recreation, negotiating architectural and interpersonal community barriers, social skills training, creative problem-solving, accessing community resources, assertiveness, and use of community transportation. Leisure education facilitates the development of all of the skills mentioned by Whalley Hammell (see above), because they are leisure-related skills. For example, persons who learn to use community transportation services have the option to participate in leisure programs that occur some distance away from home. Also, persons who learn creative problem-solving skills may be able to cope with or overcome barriers to leisure participation. In addition, Cushman and Hassett (1992) recommend the use of adaptive equipment and sports and recreation participation in rehabilitation. Leisure education provides opportunities to explore adaptive equipment and to choose and participate in leisure activities. Finally, Coyle et al. (1994, p. 107) state that leisure involvement in rehabilitation will enable persons with SCI "to test physical abilities and skills, reestablish social networks, and enhance a personal self-image". Such opportunities are provided through leisure education as well.

Timing of Leisure Education in SCI Rehabilitation

As already discussed, leisure education has been recognized as a transitional intervention because it facilitates transitions between environments (e.g., school to work, institution to community) and stages in life (e.g., adolescent to adulthood, pre-retirement to retirement). According to Bullock and Howe (1991), the appropriate time to provide a leisure education intervention (for persons with SCI) is during the period of transition from hospital to community. The literature provides ample support for this approach. Dunn (1981, p. 21) states that leisure education programs are more likely to be effective if delivered in the community instead of the hospital because "skills can be more easily generalized in the immediate environment if they are learned there". Coyle et al. (1994, p.108) state that leisure education and leisure counselling "need to be recognized by the rehabilitation community as important and vital components in the postdischarge life of individuals with SCI". Similarly, Coyle et al. (1993) indicate that personal, family and social leisure for persons with SCI should be facilitated after hospitalization and during the community adjustment phase.

Evidence that individuals with SCI are at increased risk for depressive episodes post-discharge (Coyle et al., 1994; Coyle et al., 1993) and that psychological distress increases immediately post-discharge (Buckelew et al., 1991; Richards, 1986) underscores the need for delivering community reentry programs like leisure education soon after discharge; when adjustment demands seem most pronounced. In addition, research which suggests that adjustment to disability may truly begin after discharge from acute rehabilitation (Dew et al., 1983; Richards, 1986; Whalley Hammell, 1992) underscores the need for delivering leisure education during this period of transition.

Furthermore, studies which suggest that significant adjustment difficulties are not necessarily limited to the immediate year or two post-discharge (Dew et al., 1983; Lundqvist et al., 1991; Stensman, 1994) indicate that leisure education services may also be beneficial within the first few years after discharge from initial hospitalization. In fact, Trieschmann (1988) suggests that programs which facilitate community living may be useful within the first six years following SCI.

Another consideration regarding the timing of leisure education services for persons with SCI is the readiness of the recipient. Woodrich and Patterson (1983) recommend that rehabilitation professionals should consider that services may be premature for persons who are still grieving the loss of bodily functions. It is important to recognize, however, that not all persons grieve after SCI (Whalley Hammell, 1992). Also, Siosteen et al. (1990) suggest that adaptation to SCI consists of steps that are first physical and then mental. These findings reflect Maslow's (1970) hierarchy of needs in which basic physiological and safety needs must be met before higher-order emotional and psychological needs are met. Given that inpatient rehabilitation is primarily geared towards the achievement of medical stabilization (e.g., safety) and physical functioning skills (Whalley Hammell, 1992), and since it is believed that leisure can facilitate the achievement of higher-order needs (Coyle et al., 1994), it is reasonable to expect persons with SCI would be more receptive to leisure education services after their basic physiological and safety needs are achieved; that is, after discharge from inpatient rehabilitation. Finally, the trend towards shorter hospitalizations (Buckelew et al., 1991) provides increasingly less opportunity to effectively address leisure needs during

inpatient rehabilitation and points further to the potential for leisure education services in community-based rehabilitation.

Summary

This review of literature demonstrates that definitions, measurements, and findings of adjustment to disability vary among studies on SCI. Despite many inconsistencies, past research invariably supports the positive influence of perceived control on both life satisfaction and depression, two indicators of adjustment to SCI. Research also suggests that leisure and leisure education can play a positive role in enhancing adjustment to disability. Specifically, leisure and leisure education have contributed to various aspects of psychological well-being, including both life and leisure satisfaction, perceived control and perceived leisure control, and the absence of depression. Leisure, however, is problematic for many persons with SCI. The leisure education process may be used to address leisure-related problems of persons with SCI, which may subsequently result in positive effects on adjustment to SCI. It is suggested that contributions of leisure education to adjustment to disability may be manifested in improved levels of life satisfaction and depression. In addition, it is suggested that leisure education may enhance perceived control, perceived leisure control, and leisure satisfaction, thereby enhancing life satisfaction and reducing depression of persons with SCI. Leisure education is an effective community reintegration intervention that may be most effective if delivered after discharge from hospital and during the community re-entry phase of SCI rehabilitation, when adjustment problems seem more pronounced and when true adjustment to disability occurs.

METHOD

Participants

This study consisted of a volunteer sample of 30 participants with SCI who were matched on gender and age at SCI onset and then randomly assigned to experimental and control group conditions. Participants were derived from a pool of 107 clients identified by the Canadian Paraplegic Association (CPA) - Manitoba division who met the following inclusionary criteria: (a) aged 18 years or older; (b) acquired SCI within the previous 7 years; (c) discharged from rehabilitation hospitalization and living in the city of Winnipeg, Manitoba or its immediate surrounding area; (d) had not participated in another leisure education or leisure counselling program; (e) could read basic English; (f) no cognitive impairment (e.g., brain injury), and; (g) could benefit (subjectively decided by CPA staff) from leisure intervention services and/or was experiencing some difficulty in adjusting to disability. A total of 88 individuals were contacted by telephone to determine interest in the study; the remaining 19 individuals could not be located. Two of the 88 people were excluded because they resided in institutions, and one person had fibromyalgia. Unreturned telephone messages were left with 16 individuals. A standard telephone script was employed to ensure that all initial contact made by the researcher was similar (see Appendix A).

Each of 30 participants who initially agreed to participate in the study read and signed an informed consent form (see Appendix B), and then completed a pre-test battery (see Appendix C). To control for the potential of particular variables to mediate the effects of the leisure education program on adjustment to disability measurements, participants were matched on gender and age at SCI onset and then randomly assigned to

either the experimental or control group ($n = 15$). One participant dropped out of the experimental group just prior to the first leisure education session. A second participant dropped out of this group after 3 sessions because of a union strike and surgery (but expressed interest in resuming at a future date), and a third participant was removed from the study due to significant psychosocial and medical complications (i.e., consistently refocused conversations from leisure-related topics to personal medical and psychosocial issues, and attempted suicide during the program period). Two participants from the control group declined to complete the post-test battery; one without a reason and the other recently experienced a death in the family. Table 3.1 provides a comparison of key characteristics of participants for the experimental and control groups.

Design

This study employed a two-group, pre-test and post-test experimental design. The independent variable was a modified version of the Community Reintegration Program (CRP) (Bullock & Howe, 1991) leisure education intervention (see Appendix D). Thirty participants were matched according to two demographic variables, gender and age at injury, and then were randomly assigned to either an experimental group which participated in a leisure education program ($n = 15$), or a control group which did not participate in the program ($n=15$). Both groups were administered a test battery (see Appendix C) before and after the program to assess the affect of the leisure education program on five dependent variables. Two dependent variables, life satisfaction and depression, were measured to reflect adjustment to disability. The remaining three

dependent variables, perceived control, perceived leisure control, and leisure satisfaction (which have been used to assess the impact of leisure education in previous research)

Table 3.1
Comparison of Key Characteristics of Participants
for Experimental and Control Groups

Characteristic	Experimental (n=12)	Control (n=13)
Gender	(%)	(%)
Female	33.3	30.8
Male	66.7	69.2
Race		
Caucasian	100	92.3
Aboriginal	-	7.7
Age	(years)	(years)
Mean	42	45
Range	25,62	25, 66
Age at SCI Onset		
Mean	38	41
Range	18, 60	19, 64
Time Since Injury	(%)	(%)
1 – 2 years	25	7.7
2 – 3 years	16.7	46.2
3 – 5 years	16.7	23.1
5 – 7 years	41.7	23.1
Level of Injury		
Paraplegic	33.3	53.8
Quadriplegic	66.7	46.2
Severity of Injury		
Complete	25	23.1
Incomplete	75	76.9
Cause of Injury		
Vehicle-related	41.7	46.2
Medical	50.0	38.5
Other	8.3	15.4
Education		
<Grade 12	1.0	15.4
Secondary	33.3	38.5
Post-secondary	25.0	15.4
Undergraduate	33.3	15.4
Graduate	-	15.4

Employment		
Student	8.3	-
Employed	33.3	46.2
Self-employed	-	15.4
Unemployed	16.7	15.4
Retired	25.0	15.4
Long Term Disability	16.7	7.7
Annual Income (\$)		
10,000 – 15,000	16.7	38.5
15,001 – 20,000	8.3	-
20,001 – 30,000	16.7	7.7
30,001 – 40,000	25.0	15.4
40,001 – 50,000	16.7	-
> 50,000	8.3	15.4
Not reported	8.3	23.1
Living Arrangements		
Alone	33.3	38.5
With friends	16.7	-
With parents	-	7.7
With spouse	25.0	53.8
With spouse and children	25.0	-
Marital Status		
Single (never married)	41.7	15.4
Co-habiting (but single)	-	7.7
Married	50.0	46.2
Separated	-	7.7
Divorced	8.3	23.1
Mood Altering Medications		
Yes	25	15.4
No	75	84.6
Degree of Pain		
No problem	25.0	38.5
Small problem	33.3	23.1
Moderate problem	25.0	23.1
Major problem	16.7	15.4
Currently receiving rehab/support services		
Yes	50	46.2
No	50	53.8

were measured in order to determine their relationships to both life satisfaction and depression and, therefore, served as secondary measures of adjustment to disability. Field

notes were recorded by the researcher after each session of the intervention. Following the post-test battery, participants were invited to offer their opinions about personal adjustment to disability.

In addition, social validity interviews (see Appendix E) were conducted at the end of the study to determine whether experimental group participants felt the leisure education program had had a positive affect on their lives. The purpose of social validity procedures is to have participants assess the social significance (value) of the goals, procedures, and outcomes of an intervention; to validate an intervention (Wolf, 1978), or to evaluate the acceptability and viability of an intervention (Schwartz & Baer, 1991). The social validity questionnaire used in this study was adapted from a questionnaire used by Mahon and Martens (1996), who assessed the effect of a leisure education program on adults with developmental disabilities in supported employment settings. The questionnaire consisted of six questions and a Likert-type scale response ranging from 1 (not important) to 4 (very important), followed by an open-ended question. For the present study, one question from Mahon and Marten's survey was replaced with another that assessed the value of having someone with SCI deliver the intervention. The social validity interviews were administered by telephone by another graduate student who was familiar with social validity surveys and leisure education. A standard telephone script was employed to ensure that all contact was similar (see Appendix F).

Leisure Education Intervention

The Community Reintegration Program (CRP) by Bullock and Howe (1991) is a transitional therapeutic recreation program for persons with physical disabilities who

have recently moved from rehabilitation hospitalization back into their community. Bullock and Howe indicate that the CRP is concerned with the adjustment and functioning of persons with disabilities. It is designed to help persons with recently acquired physical disabilities gain the awareness, skills, and knowledge that are needed for the greatest possible degree of independent leisure functioning in a community environment (Bullock & Howe, 1991). Studies have shown that CRP has "improved behavioral functioning, adjustment to disability, autonomy, and enhanced quality of life" of persons with neuromuscular disabilities (including persons with SCI) (Bullock & Howe, 1991, p. 16), and has positively affected perceived leisure control, perceived leisure competence, life satisfaction (psychological well-being) and leisure boredom of older adults living in the community (Searle et al., 1995).

For the purposes of this study, the CRP model was modified to reflect a person-centred approach to leisure education. The CRP was designed by Bullock and Howe (1991) as a directional model, which suggests that participants would progress through the program in a prescribed order (i.e., moving systematically through units 1 to 12). According to Bullock and Mahon (1997, p. 385), however, person-centered leisure education services should be individualised in that the "unique needs of the individual (should) dictate the order in which different components or elements are introduced and, indeed, whether one, some, or all of the components are necessary for the given individual". They add that many people may want or need to proceed through a systematic leisure education process, but that it is dangerous to assume that all people will require the same process. Consequently, the present study incorporated an individualised approach to the CRP model. Participants were introduced to each unit, but

the order in which the units were introduced, the amount of time spent on each unit, and the extent to which the content of each unit was completed depended upon individual needs. If a particular unit was not completely addressed in this program, it was because the participant already was familiar with the content in it (learned prior to the program). This person-centered approach assumed that at the end of the program, all participants were at comparable levels in terms of familiarity with the contents of the leisure education program.

Bullock and Howe (1991) indicate that the conceptual framework for the CRP is based on normalization and social valorization theory (Wolfensberger, 1972, 1985), which consists of both individual and societal response to disability. According to Bullock and Howe (1991, p. 9), "social role valorization theory posits that successful re-integration consists of both personal adjustment" as well as "actual valued (by society) social participation by individuals" (Wolfensberger, 1985, p. 71). Bullock and Howe suggest that an effective way to promote social interaction and societal acceptance for persons with disabilities who have recently returned home and experienced large amounts of free time, is through recreation and leisure. Consequently, the CRP addresses "personal and societal constraints on meaningful recreation of clients in the least restrictive environment" (Bullock & Howe, 1991, p. 9).

Attribution theory provided another theoretical framework for this study's intervention. As explained by Witt and Ellis (1987), attribution theory is based on the assumption that people need to understand events in their environment, and this understanding is derived from attributing causes to events along two dimensions: internal or external factors and stable or unstable factors (Weiner, Friezen, Kukla, Reed, &

Rosenbaum, 1971). The internal versus external dimension delineates whether the cause of an event is due to internal characteristics (e.g., ability or effort) as opposed to factors outside of people (e.g., task difficulty or luck). The stable versus unstable dimension indicates the pervasiveness of the cause over time (Witt & Ellis, 1987). Stable causes may change gradually over time (e.g., ability and task difficulty), whereas unstable causes consist of a lack of predictability and are dynamic (e.g., luck and effort). This model can be applied to this study in several ways.

First, it can be used to understand how psychological well-being can be affected by whether an individual attributes the causes of events or behaviours to either internal factors or external factors (Mactavish & Searle, 1992; Searle & Mahon, 1991) and also to stable or unstable factors (Witt & Ellis, 1987). According to MacNeil and Teague (1987), persons try to determine causes of behaviour in order to exercise control over the environment. This is related to the construct locus of control, which was introduced by Rotter (1966). Rotter suggests that individuals who perceive that they are in control of their lives have an internal locus of control, whereas persons who perceive that events in their lives are the result of other individuals or uncontrollable factors have an external locus of control. Attribution theory, in accord with this construct of control, suggests that individuals who attribute events or behaviours to internal and stable qualities perceive that they have more control over their environment. In contrast, persons who attribute events or behaviours to external and unstable factors perceive that they have less control over their environment. Attributions to internal and stable factors such as ability rather than to external and unstable factors such as luck, therefore, should foster perceptions of control.

The process of leisure education can be used to influence perceived causal attributions in leisure participation (Dixon, 1979) and, thereby, perceptions of control. Specifically, the CRP provides opportunities to make choices, to analyse activity skills, to address barriers, to set goals, and to follow through on personal leisure action plans, all of which allow participants to influence activity outcomes and exercise control. In the present study and as suggested by Dixon, participants were reminded about the influences of their effort and, moreover, ability, in effecting each positive outcome experienced. If perceived causal attributions of outcomes were attributed to individual characteristics in this study, participants' perceptions of control should have been positively effected. In addition, CRP is designed to foster perceptions of control by its self-study nature and through provisions for reciprocity (Searle et al., 1995). The present study provided opportunities for reciprocal relationships between the researcher and participants during individualised program sessions, and among participants during group program sessions. Since perceptions of control are directly related to psychological well-being (Iso-Ahola, 1980; Searle & Mahon, 1991), and since persons with SCI often experience a loss of personal control over events because of their disability (Decker & Schulz, 1985; Trieschmann, 1988), interventions like CRP, which are designed to foster a sense of personal control, have the potential to positively affect psychological well-being, and thereby facilitate adjustment to disability.

Second, attribution theory can be applied to leisure education by addressing affect (Dixon, 1979). Dixon explains that therapeutic recreation is concerned with the affective domain of leisure; that participants should enjoy and be satisfied with their leisure experiences. He suggests that since people are more pleased when they succeed than

when they fail (Bailey, Helm, & Gladstone, 1975), leisure will be more satisfying when they succeed. The CRP is designed to maximize opportunities for success rather than failure. The CRP components of analyzing activities, adapting activities and modifying equipment, identifying and addressing leisure barriers, learning and practicing leisure skills, and leisure goal setting and action planning prepares participants for successful activity participation. Furthermore, the CRP evaluation process enables participants to revise goals and plans according to what is realistic, thereby increasing opportunities for success. Finally, Dixon (1979, p. 5) indicates that "those who succeed express more pleasure when their success is explained in terms of their internal abilities and efforts as opposed to an external factor like luck". As mentioned earlier, CRP participants were reminded about the influences of their effort and ability in effecting successful experiences. In addition, efficient leisure education techniques (e.g., activity adaptation, manipulating the task difficulty) was employed as needed in order to facilitate successful leisure outcomes (Dixon, 1979).

Attribution theory can be used to help understand how leisure satisfaction and perceptions of control (both within leisure experiences and in one's environment) can be positively effected by the CRP leisure education model. As explained in the previous chapters, these psychological constructs are positively related to life satisfaction and negatively related to depression, two psychological indicators of adjustment to disability. Consequently, attribution theory provided an overall conceptual framework for understanding how the CRP model might effect adjustment to disability.

Procedure

Participants were contacted by telephone in order to schedule a meeting with the researcher at either CPA-Manitoba or the participant's home for review and completion of the informed consent form, collection of demographic data (see Appendix G), and completion of the pre-test. This initial meeting required between 60 and 90 minutes. To reduce bias, the protocol for the data collection instructions were standardised (see Appendix H). Following the pre-test session, participants were matched according to gender and age at SCI onset and then randomly assigned to the experimental and control groups.

Participants in the control group were informed by telephone that they were assigned to the control group and that they should continue their lifestyles as per usual during the course of the study. Control group participants also were informed that they would have the opportunity to participate in the CRP leisure education program after completion of the present study.

Participants in the experimental group were informed by telephone that they were assigned to the leisure education group. Bullock and Morris (1990) indicate that CRP can be delivered individually, by group, or by a combination of the two approaches. For the present study, a combination of the two approaches was offered, and participants could choose whether they wanted to attend any of the two group sessions. The researcher previously had used a similar delivery format within her clinical work and had found that persons with SCI enjoyed the opportunity to share experiences, offer suggestions, and provide peer support to fellow participants during group sessions, while individualised

sessions provided opportunities for personal issues to be addressed and for participants to proceed at their own pace.

Nine participants chose to attend the introductory group session (one dropped out of the program just prior to a session). The other 6 participants opted for individualised introductory sessions; two of them indicated they were not comfortable in group settings, and four indicated that individualised meetings would better suit their schedules. The first group session included an overview of the CRP model and an introduction to the first two CRP units. Also, each participant received the user-friendly, self-study CRP Participant Guide (Bullock & Morris, 1990) (see Appendix I) which was used to facilitate discussions and written exercises during the course of the study. Participants had the option to complete the written exercises independently or with the assistance of the researcher.

The second group session was delivered during the 4th week after the program commenced and addressed barriers (unit 8), and personal and community resources (units 10 and 11 respectively). Although these units were designed to occur later in the original CRP directionally-oriented model, they were delivered fairly early in this program because such issues had been priorities for persons with SCI in previous leisure education programs delivered by the researcher. For example, the researcher had found that many personal and community resources inevitably had been identified during unit 5 of CRP, when participants wanted to know where they could locate and acquire adaptive devices, or where they could go to try out a new activity. Knowledge of such resources, therefore, was beneficial earlier in the program. Eight participants chose to attend the second group session (seven of these eight participants had attended the first group session), but three

cancelled on the same day of their scheduled sessions because of (a) pain; (b) involvement in a union strike, and; (c) no reason. Although invited to attend the second group session, six participants opted for individualised sessions for reasons identical to those reported for the first group session. Group sessions were conducted in a meeting room at the Society for Manitobans with Disabilities (same building which houses CPA-Manitoba). The researcher met individually with the 6 participants who opted out of the group sessions in order to introduce the components addressed during the group session.

In addition to the group sessions, the researcher met individually with each CRP participant for an average of 80 minutes every week and a half in order to follow-up on material covered during group sessions, and to address the remaining CRP units. At least one telephone contact interceded each of these meetings. The order that CRP units were introduced during individualised sessions reflected individual needs, as recommended by Bullock and Mahon (1997). They suggest that since person-centered leisure education services should be offered according to the unique needs of an individual, the order in which leisure education components are introduced should depend upon individual needs. Individualised sessions were conducted at the location of participants' choice. Meeting locations included CPA-Manitoba, participants' homes, work and school. Later, as CRP participants proceeded through the program and pursued community-based activities, sessions occurred at the activity site.

Each of the CRP units consisted of one or more of the following activities: video introduction to the concept of leisure, paper and pencil exercises, discussions, brainstorming, group problem-solving exercises, and recreation activity participation. Following each session, the researcher recorded field notes in order to capture (a) what

was done during the session, (b) personal thoughts and introspections about the intervention's content and process (e.g., future modification needs), and (c) participants' attitudes and comments. This qualitative data was collected to supplement the quantitative data.

CRP participants were encouraged to proceed through the program units at their own pace, and were told by the researcher that the program should not require more than 16 weeks to deliver. This time period was based on the average time (17 weeks at 1 hour per week) required to deliver CRP to older adults (Searle et al., 1995), on the researcher's past experience in delivering CRP to persons with SCI, and on the introduction of five CRP units during two group sessions. As found by Searle et al. (1995), the actual amount of time required for each CRP participant to complete the program reflected individual needs; participants required more or less time to complete the program, depending on the personal issues which needed to be addressed and the amount of time which needed to be spent on each unit.

Near program completion, CRP participants met individually with the researcher in order to evaluate their leisure goals and articulate plans for continued leisure participation. In addition, the researcher terminated the program over four weeks through a fading process, whereby contact with participants gradually decreased from that of individualised meetings and some telephone contact, to telephone follow-up only, to final termination of contact. Searle et al. (1995) suggested that this would reduce the effects of visits (i.e., attention from the researcher) on the results, and to ensure the results were reflective of the intervention.

After the fading process was completed for a particular CRP participant, the participant as well as the control group participant who had been matched with the CRP participant was contacted by telephone in order to schedule an individualised meeting at the participant's location of choice for completion of the post-test. Three control group members preferred to complete the post-test by mail. The procedure of staggering post-tests was necessary to account for the variability in time at which CRP participants completed the leisure education program. The procedure continued until all CRP participants completed the leisure education program.

During the post-test session (after completion of the post-test battery), participants were invited to offer their opinions about factors they perceived as having been either instrumental or a barrier to their adjustment to SCI. This strategy provided an opportunity for participants to respond in a way that was not limited to the questions asked in the test battery. Participants had valuable qualitative data to offer which could not be captured in the quantitative test battery. Verbal responses of five participants were recorded on an audiocassette and later transcribed. Responses from 17 others were recorded on paper by the researcher because they did not feel comfortable being voice recorded, while the three control group members who responded by mail (two people were out of the city at the time and the other thought it was more efficient to respond by mail) wrote their responses on a sheet of paper enclosed with the post-test battery. The resultant qualitative data was collected to complement the quantitative data.

Participants from the experimental group were also contacted by telephone by another research student and were asked to assess the value of the leisure education intervention by verbally responding to a social validation questionnaire. It was necessary

for these questions to be asked by someone external to this research study in order to reduce the potential for CRP participants to respond to in a socially desirable manner (e.g., to respond according to what they thought the researcher/leisure educator desired to hear). Open-ended responses were recorded in note form as a supplement to the social validity's quantitative data.

Instrumentation

The following measures were used to assess adjustment to disability of the experimental and control groups during both the pre- and post-tests: (a) Life Satisfaction Index A (LSIA-A) (Neugarten et al., 1961; Adams, 1969); (b) Perceived Control Scale (Decker & Schulz, 1985; Schulz & Decker, 1985); (c) Center for Epidemiologic Studies - Depressed Mood Scale (CES-D) (Radloff, 1977); (d) Perceived Leisure Control Scale - Version C (Witt & Ellis, 1987), and; (e) Leisure Satisfaction Scale (LSS) - Short Form (Beard & Ragheb, 1980). Field notes were recorded by the researcher after each intervention session. Immediately after the post-test battery was completed, all study participants were invited to offer their opinions about factors they believed had either helped or hindered them in adjusting to their disability. Finally, social validity interviews were conducted by telephone by another graduate student at the end of the study. The questionnaire consisted of 6 questions in which participants ranked and commented on the importance of the leisure education program's content, process, delivery, and relevance for family and friends.

The Life Satisfaction Index A (LSIA) of Neugarten et al. (1961), one of the most widely used multi-item life satisfaction scales (Fuhrer, 1994), was designed to measure subjective psychological well-being (Adams, 1969). This original version contained 20

questions which were intended to tap five distinct dimensions of life satisfaction: zest for life versus apathy, resolution and fortitude, congruence between desired and achieved goals, self-concept, and mood tone. Later, this scale was reduced to 18 items as a result of item reliability checks by Adams (1969). Results of this factor analysis revealed that the LSIA-A is composed of three factors: zest, mood tone, and congruence between desired and achieved goals, and one unnamed factor (Adams, 1969). Although Adams concluded that the LSIA-A is a fair estimate of life satisfaction, he and more recent research (Liang, 1984) have reserved caution about the conceptual validity of the scale. Liang concludes that the validity of the scale depends on one's definition of life satisfaction. For example, both Adam's and Laing's scales do not meet the conceptual validity criterion of Neugarten's definition of life satisfaction because fortitude and self-concept did not emerge from their factor analyses. Furthermore, Laing (1984, p. 621) suggested that even though Adams was able to identify only three factors from the 18-item LSIA-A, "this does not necessarily negate the existence of factors such as positive self-concept and fortitude". The dimensionality of LSIA, therefore, is inconclusive and poses concern about its validity.

Despite these debates, Adams' (1969) 18-item LSIA-A version was chosen for the present study because it had been used by at least three other studies on persons with SCI (e.g., Crisp, 1992; Decker & Schulz, 1985; Fuhrer et al., 1994; Schulz & Decker, 1985). The responses available are Agree, Disagree, and Undecided. Each response indicating life satisfaction receives one point, while each response which does not indicate life satisfaction or undecided receives zero. Scores can range from 0 to 18, with higher scores indicating greater life satisfaction. Adams obtained a reliability of .87, using Spearman-

Brown coefficient. Ragheb and Griffith (1982) obtained an alpha reliability coefficient of .83 with older adults. Schulz and Decker (1985) indicate that high correlations have been reported ($r > .75$) between LSIA-A scores and other life satisfaction measures. Their study on adults with SCI (aged 40 years or more) resulted in a Cronbach's alpha of .76 (internal consistency) for the total scale and values considerably lower for the subscales measuring the four factors. Crisp (1992) reported an internal consistency of .72 with a younger sample of persons with SCI.

To measure perceived control, the index constructed by Schulz and Decker (1985) and Decker and Schulz (1985) for their study on the adjustment of adults with SCI (aged 40 years or more) was employed. Their index consists of five Likert-type items, which measure perceived control over various life circumstances. Participants indicate the degree of control they have over various life circumstances according to a scale that ranges from 1 (not at all) to 5 (completely). The possible range of scores is between 0 and 25, with higher scores indicating higher perceived control. Schulz and Decker reported a high level of internal consistency ($r = .81$, Cronbach's alpha) for this scale. Crisp (1992), who studied psychological adjustment of a younger sample of adults with SCI (under 40 years old), also used this measure and reported a reliability coefficient of .81.

The Center for Epidemiologic Studies - Depressed Mood Scale (CES-D) (Radloff, 1977) is a 20-item self-report scale designed to measure symptoms of depression in the general population. It has also been shown to be useful in clinical and psychiatric settings. The CES-D measures current level of depressive symptomology, with emphasis on the affective component - depressed mood. It was designed to avoid the problem, characteristic of some depression scales, of placing too much emphasis on somatic items

that frequently characterize nondepressed older or persons with disabilities (Schulz & Decker, 1985). The items were selected from previously validated scales (Beck Depression Inventory, Beck, 1967; Zung's 1965 Self-Rating Scale; MMPI), from the literature, and from factor analytic studies. The CES-D scale requires about 15 minutes to administer (Coyle et al., 1994). Respondents are asked how often over the past week they have experienced each of the 20 symptoms on the CES-D scale. Responses are scored using a four-point scale which ranges from (0) rarely or none of the time (less than one day a week), to (3) most or all of the time (5 - 7 days a week). Items 4, 8, 12, and 16 are reverse coded and then scores are summed to arrive at a total scale score for each respondent. Scores can range from 0 to 60, with higher scores indicating more symptoms of depression. There are two ways that CES-D scores have been interpreted. First, Myers and Weissman (1980) proposed a critical value of 16 on CES-D scores as indicative of probable risk or 'caseness' for an episode of clinical depression (Coyle et al., 1994; Coyle et al., 1993). This cut-off point is intended as a means of identifying high-risk groups with depressive symptoms rather than providing clinical diagnosis in individual cases. The percentage of respondents in a sample who score at or above 16 can be compared to that of other populations; for example, the general population (19%), inpatient psychiatric population (70%), or outpatient psychiatric population with severe depression (100%) in Radloff's study. Second, sample means can be compared to other population means; for example, the general population (9.25), inpatient psychiatric (24.42), or outpatient psychiatric (39.11) (Radloff, 1977).

Radloff reports a very good internal consistency of .85 (Cronbach's alpha) for the general population and .90 for the psychiatric population. Split-half reliability and

Spearman-Brown reliability coefficients ranged from .77 to .92., and test-retest correlations ranged from .51 to .67 (tested over 2 to 8 weeks), and .32 to .54 (tested over 3 months to 1 year) (Radloff, 1977). Reliability analysis of this scale in research with samples of individuals with SCI resulted in Cronbach's alphas of .83 (Decker & Schulz, 1985; Schulz & Decker, 1985), .88 (Crisp, 1992), .86 (Coyle et al., 1993), and .87 (Coyle et al., 1994), indicating a high internal consistency. Concurrent validity of the scale is excellent, correlating significantly with several other self-report measures of depression and mood (Radloff, 1977). Radloff indicates that discriminant validity is also good. Correlations between the CES-D and age, social class, and gender are minimal (Decker & Schulz, 1985, Schulz & Decker, 1985).

The Perceived Leisure Control Scale - Version C (Witt & Ellis, 1987) assesses the degree to which an individual perceives he or she is able to control the initiation, process, and outcomes of leisure endeavours. This scale consists of 17 items which are measured on a five-point, Likert-type scale that ranges from 'Strongly Agree' to 'Strongly Disagree'. The scoring for this scale is a simple additive procedure, with a higher score reflecting a higher degree of internal control. Witt and Ellis reported that the test-retest reliability for this scale has ranged from .79 to .81 and internal consistency measures (Cronbach, 1951 alpha coefficient) have ranged from .86 to .94. The test-retest reliability with older adults resulted in a coefficient of .72 (Searle & Mahon, 1991) and with older adults with mental disability it was .74 (Mactavish & Searle, 1992). The predictive (construct) validity of this scale, as a sensitive index of locus of control, has been established and has been well documented by Witt and Ellis (1987).

To measure leisure satisfaction, the short form (24 items) of Beard and Ragheb's (1980) original Leisure Satisfaction Scale (LSS) (51 closed-ended items) was used. The LSS was reduced to avoid users' haphazard selection of items. The short form consists of six factors: (a) psychological benefits of leisure, (b) educational or intellectual stimulation created by leisure, (c) social relationships created by leisure experiences, (d) relaxation or relief from stress afforded by leisure, (e) physiological or physical fitness goals met by leisure experiences, and (f) aesthetic perceptions created by leisure experiences (Zoerink & Launer, 1991). The LSS-Short Form has a five-point scale ranging from (1) almost never true to (5) almost always true. Most respondents complete the LSS-Short Form in twenty minutes. The original index yielded the following reliability coefficients for the six LSS components: psychological (.84), educational (.82), social (.80), relaxational (.85), physiological (.93), and environmental/aesthetic (.83). The total alpha reliability coefficient for the LSS was .95 while the LSS-Short Form yielded (from a non-disabled sample) an alpha reliability coefficient of .93 (Beard & Ragheb, 1980). Beard and Ragheb tested the content validity on a sample of 160 professionals and educators in the recreation and leisure field, whose reactions reflected "face" validity. For the present study, item 17 was revised from "My leisure activities are physically challenging" to "I pursue leisure activities that are physically challenging" and 19 was revised from "I do leisure activities that restore me physically" to "I do leisure activities that refresh me physically".

Analysis

To determine whether there was a significant difference between the control and experimental groups on each of the dependent variables of life satisfaction, depression, perceived leisure control, perceived control, and leisure satisfaction, analysis of covariance (ANCOVA) was used, using the pre-test scores as covariates. Since participants were matched on only two demographic variables (gender and age of SCI onset) of many that may be related to SCI adjustment, independent samples t-tests were conducted to test for significant differences between the means of the control and experimental groups on each of the demographic variables listed in Table 1. Pearson Product Moment correlations were performed on pre-and post-test results to determine the nature of the relationships between the dependent variables. In addition, independent samples t-tests, Pearson correlations, and analyses of variance (ANOVA) were used to assess whether any of the demographic variables were significant factors in the five dependent variables (based on the pre-test scores of the entire sample). Descriptive statistics were used to analyse the responses from the likert scale portion of the social validation questionnaire. Finally, cross-case analysis (Denzin & Lincoln, 1994) was conducted on the researcher's field notes, and on the participants' responses to both the post-test qualitative probe about adjustment to disability and the qualitative data collected from the social validation questionnaire. In particular, qualitative data were inductively coded and recurring themes were identified across cases (i.e., across field notes taken from each meeting with participants and across participants' comments).

RESULTS

Analysis of covariance (ANCOVA) was used to test for significant differences between the experimental and control groups on each of the five dependent variables separately, using pre-test scores as covariates to control for possible existing pre-test differences between control and experimental groups. The results revealed there were no statistically significant differences between the experimental and control groups on any of the dependent variables. Without statistical significance, the hypotheses in this study were rejected.

Comparison of main effects between the experimental and control groups for each of the dependent variables at pre-and post-test, however, showed interesting trends. As illustrated in Figure 4.1, the mean life satisfaction score for the experimental group increased slightly between pre-and post-tests while the mean life satisfaction score for the control group decreased slightly. Figure 4.2 indicates that the mean depression score for the experimental group decreased at post-test while the mean depression score for the control group increased. Figure 4.3 illustrates that the mean leisure satisfaction score for the experimental group increased at post-test while the mean leisure satisfaction score for the control group decreased.

These trends were not evident for either of the two measures of control. Specifically, mean scores for perceived control and perceived leisure control were slightly higher for both the control and experimental groups at post-test (Figures 4.4 and 4.5). Table 4.1 displays the means and standard deviations for the five dependent measures.

Table 4.1
Summary of Means and Standard Deviations
of the Dependent Measures for Experimental and Control Groups

	Means and Standard Deviations	
	Experimental (n=12)	Control (n=13)
Life Satisfaction		
Pre-test	8.42, 4.40	8.85, 3.26
Post-test	8.67, 4.45	8.77, 4.00
Depression		
Pre-test	19.92, 12.71	12.62, 10.24
Post-test	16.50, 10.67	13.77, 11.12
Leisure Satisfaction		
Pre-test	83.75, 19.82	89.39, 12.02
Post-test	89.17, 18.54	87.92, 11.67
Perceived Control		
Pre-test	17.50, 3.00	19.46, 2.57
Post-test	18.25, 3.91	20.00, 3.61
Perceived Leisure Control		
Pre-test	55.08, 8.50	58.85, 7.41
Post-test	57.00, 11.66	59.54, 5.97

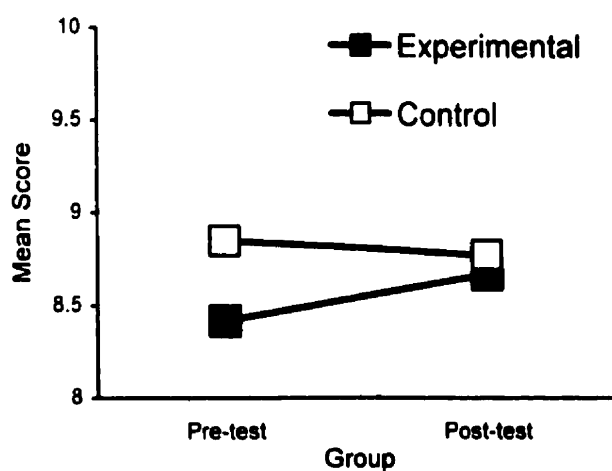


Figure 4.1. Main effects for life satisfaction by group.

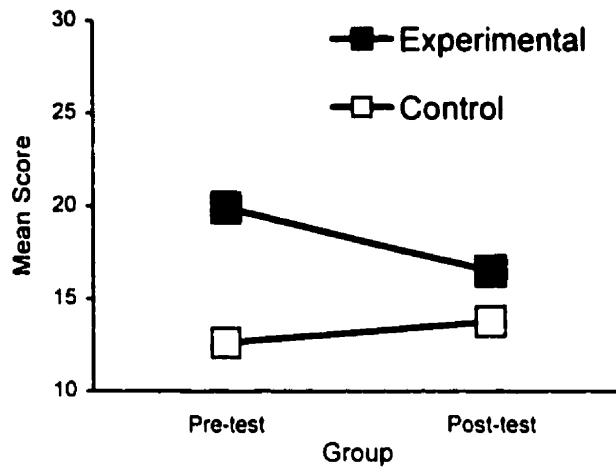


Figure 4.2. Main effects for depression by group.

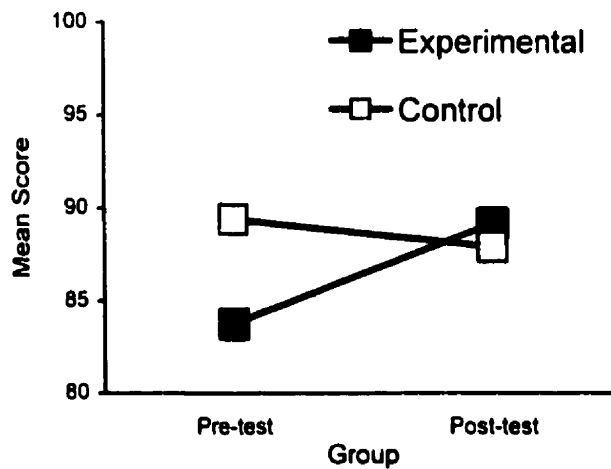


Figure 4.3. Main effects for leisure satisfaction by group.

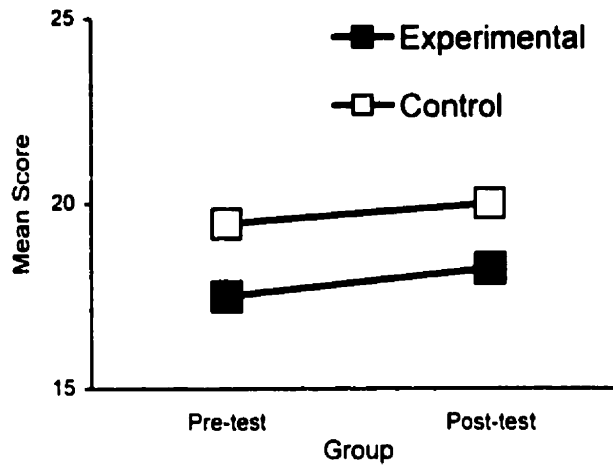


Figure 4.4. Main effects for perceived control by group.

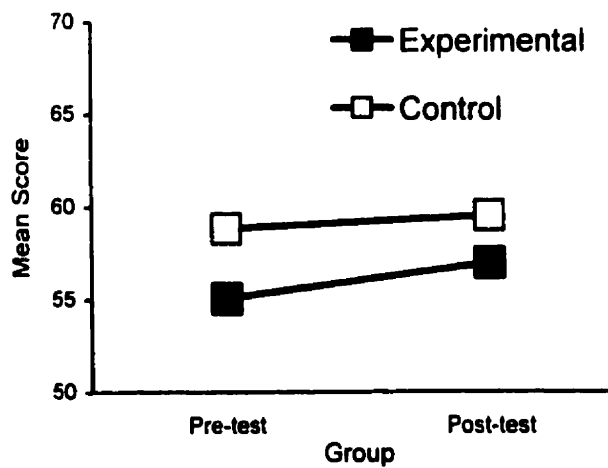


Figure 4.5. Main effects for perceived leisure control by group.

Independent samples t-tests were conducted to determine whether the experimental and control groups differed on any of the demographic variables listed in Table 3.1. There were no significant differences for any of these variables. In addition, independent samples t-tests, analysis of variance, and correlations were used to determine whether any of these demographic variables were significant factors in adjustment to disability. These data were collected merely for interest in comparing results with prior adjustment to SCI studies. Results are based on pre-test scores for all 25 participants. Gender was a significant factor in depression, $t(23) = .227, p < .05$, and perceived control $t(23) = .2073, p < .05$, indicating males had better adjustment than females. Time since injury was a significant factor in leisure satisfaction, $F(3,24) = 5.204, p < .05$, indicating that greater leisure satisfaction was associated with greater time since injury. Finally, level of injury was a significant factor in depression, $t(23) = 2.124, p < .05$, with quadriplegics showing greater depression than paraplegics.

Correlational Analysis

The purpose of this phase of analysis was to determine the relationships between the five dependent variables. Table 4.2 provides a comparison of Pearson correlations that were conducted for both pre-test and post-test results. Interestingly, the number and strength of significant correlations were mostly greater at post-test in comparison to pre-test. Pre-test correlations indicate significant correlations ($p < .01$) between perceived control, life satisfaction and depression, and stronger significant correlations ($p < .01$) between perceived leisure control and leisure satisfaction. Significant correlations were

also found between leisure satisfaction and life satisfaction, and between perceived leisure control and life satisfaction, but at a lower level of significance ($p < .05$).

At post-test, all five measures were significantly correlated with each other with only perceived leisure control and depression, and perceived leisure control and perceived control having lower levels of significance ($p < .05$) than the other variables. Interestingly, leisure satisfaction and perceived leisure control correlations decreased slightly in strength of association at post-test.

Table 4.2
Comparison of Pre- and Post-test Correlation Coefficients
Among Five Measures Relating to Adjustment to Disability

	Pre-test			
	Depression	Leisure Satisfaction	Life Satisfaction	Perceived Control
Leisure Satisfaction	-.30			
Life Satisfaction	-.53**	.45*		
Perceived Control	-.56**	.18	.55**	
Perceived Leisure Control	-.31	.75**	.47*	.19

	Post-test			
	Depression	Leisure Satisfaction	Life Satisfaction	Perceived Control
Leisure Satisfaction	-.72**			
Life Satisfaction	-.79**	.72**		
Perceived Control	-.59**	.57**	.63**	
Perceived Leisure Control	-.43*	.71**	.51**	.48*

Note: * significant $p < .05$ (2-tailed); ** significant $p < .01$ (2-tailed)

bold numbers identify changes in significance between pre- and post-tests

Social Validity Questionnaire

All twelve participants in the experimental group answered the social validity questionnaire, yielding both quantitative and qualitative data. The six questions on this questionnaire were analysed separately. The content of the questionnaire and percentages of participant responses are provided in Table 4.3. Question one, reflecting the social significance of the goal of leisure education, asked whether participation in community recreation was important to participants. The overall mean score on the four-point scale that ranged from not important to very important was 3.0 out of a possible 4.0. A strong theme that was revealed from participants' comments reflected leisure awareness, or an acknowledgement of the benefits of leisure. For example, participants said that recreation helps them to meet new people, to cope, to relieve stress and boredom, and that it is fun and enjoyable. A second theme related to increased leisure knowledge. One participant said that knowledge of recreation options empowered him and "blew open a whole world of possibilities that were available". Another participant said that recreation participation is "a matter of knowing your limitations, and also what's available in the community". A third theme was negative leisure attitudes. Participants who did not value recreation participation said, "I am used to doing nothing" and "there aren't many things that I'm interested in around the community or neighbourhood. I'm set in my ways".

Question two, reflecting the social appropriateness of the leisure education program's procedures, asked about the importance of identifying what, why, and how to do activities of interest, identifying ability to do activities with or without adaptations, and addressing barriers. The overall mean score on this question was 2.8 out of 4.0. A prominent theme identified from participants' comments was self-awareness in leisure.

Table 4.3
Percentages of Participant Responses for the Likert-type Scale
of the Social Validity Questionnaire

Social validity questions	Not Important (%)	Sort of Important (%)	Important (%)	Very Important (%)
1. When (researcher) first contacted you, she indicated that the leisure education program would focus on helping you participate in community recreation activities you enjoy. Is this important to you? Please explain.	8.3	25	25	41.7
		<u>Mean and S.D.</u> 3.00, 1.04		
2. During the first number of weeks, you spent time discussing what you do for fun and why you do it, how you do it and can you do it either with or without adaptations, and you may have visited different activities in the community to see whether you might wish to participate in any one of them, and to determine what things, if any, might prevent you from doing them, and how you could deal with such barriers. Was this important to you? Please explain.	16.7	16.7	33.3	33.3
		<u>Mean and S.D.</u> 2.83, 1.12		
3. During this program, you made a decision about what recreation activity or activities you wanted to participate in, you made plans to participate in this activity and you carried out these plans. Was this important to you? Please explain.	8.3	16.7	41.7	25
		<u>Mean and S.D.</u> 2.91, .944		
4. Having completed this process over the past several months, describe for me what has happened to you as a result of this process. How would you rate the importance of this process?	8.3	8.3	33.3	50
		<u>Mean and S.D.</u> 3.25, .97		
5. Would you recommend this process to friends and family members? Yes or no.	<u>Yes</u> 91.7			<u>No</u> 8.3
6. Was it important that someone with a spinal cord injury delivered the leisure education program? Please explain.	<u>Yes</u> 100			<u>No</u> 0

In other words, participants learned about themselves in relation to leisure. For example, one participant said, “I am quite limited in what I can do, so it was nice to see what I am able to do that I wasn’t aware of”. Another person said, “many things I wouldn’t have even considered before, but I realized through the program what’s possible – again only limited by lack of knowledge”. Also, the importance of leisure planning was recognized. Participants said the process “...showed I had to plan stuff out before I went and did it”, and that “it set the stage”. Finally, the importance of barriers was a significant theme. One participant said, “If there’s any barriers, I figure it out right away and fix it”. In contrast, many other participants commented on barriers that could not be overcome in this program. Participants said, “I haven’t been doing things because of pain”, and “the only barrier was myself...I am over 50, nobody can expect me to change now”. Others said “(the process) made me think about some things I’d like to do – made me think about them more seriously, but I still have some obstacles that I have to overcome, personal things”, and “I got problems walking and it keeps me back, and I got bowel problems so I have to stay close to a bathroom, so it’s important that I stay home to feel safe”.

The third question, also reflecting the social appropriateness of the leisure education program’s procedures, asked how important it was to choose, plan for, and become involved in a recreation activity. The overall mean score on this question was 2.9. As with the previous question, self-awareness in leisure was a theme. One participant said the program “helped me with showing me what I can do when the pain is better”. Other participants said, “I like swimming. I learned a lot about where to go and different aspects of the pool – stuff like that”, and “I look at a new challenge in a new perspective

– I won't doubt everything right off the bat". Motivation for leisure participation was another prominent theme. Participants commented that the program provided an opportunity to try activities they already were interested in or thought were not possible, and that they had made plans for and wanted to try more activities after the program ended. In addition, the impact of leisure barriers on leisure participation was an important theme. Participants said, "I'm really limited by what I can do because of the pain", and "I don't leave the house – can't get in the garden and pull weeds - can't sit on the garden tractor. I am pretty limited and have gone downhill (medically)". Another person said "horseback riding was fun, but so much work – it kind of verified some of the things that have frustrated me as far as getting involved in certain things". This person was referring to the need for more and expensive adaptive riding equipment that was unavailable at the riding stable and the people resources necessary to assist in this activity.

Question four, reflecting the social importance of the leisure education program's outcomes, asked how important the changes were that resulted from the leisure education process. The overall mean score was 3.25. Several important themes were evident from participants' responses. The strongest theme that arose was increased self-confidence and motivation to try activities. One participant said he had more self-confidence and "get up and go" to do a particular recreation activity. Another participant commented, "I think I'm more willing to try different stuff, things that I never thought of doing before...". Others said, "I've made plans to do other things that I'm happy about – plans are in the works", and "it kind of put my thoughts into action – made me a little bit more aggressive about doing some things. I am more serious about giving pool (billiards) a shot. I also signed up for a water painting course". Another theme was self-awareness in leisure. For

example, participants said, “ “I’ve become aware of my disability and my ability”, and “I found that it was the bottom line whether I chose to do them or not, that it was my motivation that determined whether or not I would do them”. A sense of satisfaction with leisure participation was quite prominent as well. Participants said, “I can do painting...very successfully and am very happy with the sense of achievement I get out of it”, and that SCUBA diving, “was positive reinforcement because...it was the most challenging activity and so doing it was a positive experience”. Increased leisure knowledge was also evident. Comments included, “Now I know where and how I can do them (i.e., activities)”, and “ I got to go through a lot of information and got introduced to the Wellness Centre – I never knew we had a place like that...it has every piece of equipment and the best of pools...”. Another person said, “The process itself has given me an idea of how to go about doing things. Before I might not have done it or thought I could do it, but now I know how to do it...a different way of doing it”.

In contrast, several participants felt that they did not experience any change as a result of the program. One person remarked he did not experience change because he “didn’t do much of the activities”. This participant tried to participate, but experienced uncontrollable external barriers related to community programs that could not be scheduled during the study. Another person said, “I can’t say it has really changed me, but I can see how it could change someone else who is homebound, but I’ve always been going out”. One participant who had a physical disability since infancy, but acquired SCI in adulthood remarked that the program “didn’t help me because I’ve already adapted”.

The fifth question asked whether participants would recommend the leisure education program to friends and family. Eleven participants said yes, and one said no. The person who answered no, commented that the program “would be good for someone who wasn’t physically disabled before” (this was the participant who had been disabled since infancy, but acquired SCI in adulthood). Four people specified that the program would be most helpful to people with disabilities in particular, and one of these added that it would be most helpful to people with new injuries and people who are not involved in many activities. Another person said the program could benefit anyone regardless of ability because what was learned “extends into everyday life for everybody”.

Finally, participants were asked whether it was important that someone with a spinal cord injury delivered the leisure education program. All twelve participants said yes and the overriding theme in their comments was the value of peer counseling. Participants said, “People who aren’t affected this way don’t really understand what a person goes through – the majority don’t”, and “I knew (program leader) could understand what I was talking about – I didn’t hesitate to tell her things”. Others said, “The psychological issues are different for each person and it helps that (program leader) has had experience”, and “I trusted (program leader’s) judgement - she knew where we were coming from”. The second theme related to the value of a role model. Participants said, “because then you know you aren’t the only one around – that’s very important...I think if (program leader) can do it, why am I down in the dumpster”, and “...cause (program leader) has done a lot of different things and I figured if she can do this kind of stuff, then I can too”. Two people remarked that although it is better when the person delivering a leisure education program has SCI, it is not absolutely necessary.

Field Notes

After each program session with participants, field notes were written to capture what content was covered during the session, participant comments/response, and the researcher's thoughts about the program model and delivery. Analysis of these notes revealed several themes.

One prominent theme was the presence of many barriers that limited or prevented leisure participation. For example, neurogenic pain was a significant barrier for three participants. These participants were pursuing various treatment options to reduce the pain, and though they willingly explored activity options through written exercises, discussion, and facility tours, none of them actually participated in chosen activities. Instead, they indicated that they would participate in planned activities once their pain was better controlled. Bowel and bladder management problems limited two participants from exploring activities, although one participant tried one activity once during the program.

Another leisure barrier that may have limited leisure participation in this study was lack of companionship. Three participants who were single or lived alone indicated that they had few or no companions with whom to pursue particular leisure activities. When options were explored through the CRP unit on 'People Resources', participants acknowledged that they could be more assertive to invite others to join them in leisure activities, but also expressed concern that others were too involved in their own lives and would not have time for them. Although the researcher attempted to link participants with similar interests (with their consent), participants did not follow through beyond talking about meeting with each other. For example, two participants planned to meet to play

cards and watch movies, but these plans did not go beyond their telephone conversations.

It is interesting that one of these people remarked it was difficult to find time to meet because the other person was usually involved in family activities and so already had a source of companionship.

Financial barriers also were significant, particularly with regard to the expense of some adapted leisure equipment and certain community-based programs. For example, two participants tried horseback riding during the program and concluded that the riding equipment would require further adaptations to facilitate continued participation. Unfortunately, a highly adapted saddle was too expensive for the program to purchase and the participants could not afford it either. To compound the expense of adapted equipment, long-term riding lessons were unaffordable. Although the participants were happy they had an opportunity to try the activity once, these financial barriers prevented further participation. Similarly, other participants could not afford the cost of a recreation and fitness facility membership, an adapted handcycle or adult tricycle, or SCUBA diving equipment and lessons (although an introductory session was provided free of charge).

Leisure participation also was limited by community program schedules that did not coincide with the timing of this study. For example, three participants wanted to try sailing, but the sailing program was delayed because it could not acquire a boat lift and adapted 'sip and puff' sailboat until two weeks before the end of the sailing season; well after the end of this study. Also, one participant wanted to pursue a personalized canoe trip, but required extensive support and a practice session in a local pool. Although four attempts were made to schedule times among two canoe program leaders and the participant, the practice session could not be coordinated during the course of the study

because these leaders were on other canoe trips. Also, the provincial archery association could not schedule a demonstration for three interested participants until well after the study was completed.

Inability to acquire personally adapted recreation equipment within program duration was a leisure barrier to leisure participation for two participants. Though funding was obtained to build a modified tricycle for one participant, the Rehabilitation Engineering Department predicted a 6-month wait before the project could be started. Another participant was still involved in the design and development of a modified photography and archery wheelchair mount by the end of the study.

Interestingly, people with incomplete injuries (i.e., ambulatory with some motor and sensory deficits) expressed personal attitudinal barriers that were not evident with participants who used wheelchairs. In particular, they were unwilling to consider using conspicuous adapted leisure equipment despite admitting that it would facilitate ease of leisure participation. For example, one participant was interested in golf but had balance and walking difficulties. Although the idea of using a motorized golf cart to compensate for walking distances was entirely acceptable (perhaps because people without physical disabilities often use them), the thought of using a personalized golf cart that has a rotating seat (to lean against while swinging the golf club) was not acceptable. Instead, the participant decided that balance would improve with practice at a golf driving range. Similarly, the participant was willing to consider hiking while grasping onto a companion's arm for balance and incorporating frequent rest periods on short trails instead of using a scooter or wheelchair to enable hikes along longer trails.

Another participant with incomplete SCI enjoyed recreational cycling pre-injury, and occasionally tried bicycling post-injury. Balance was an issue, however, and safety was subsequently compromised. Despite discussion of using 'training wheels', an adult tricycle, or a handcycle, the participant refused to try any adapted cycles because this would have compromised his self-image. He remarked that he would rather push himself to do activities the 'normal' way or not do it at all. Similarly, another participant with incomplete SCI refused to use the handi-transit service to access community recreation because of feeling "like a loser". This participant also expressed "fear of failure" as a barrier in pursuing activities in public.

In addition to barriers, the field notes yielded the several themes that supported the person-centred approach to leisure education. First, the CRP units were addressed in varying orders, supporting the non-directional model of leisure education. For most participants, units 1 to 5 were introduced in chronological order and were more formally addressed through written exercises and discussion. Units 6 to 11, however, were inevitably incorporated into the first 5 units via written exercises and/or discussions. For example, people, personal and community resources often were discussed within the parameters of adapting activities, equipment modifications and barriers. If a participant required expensive adaptive equipment, financial resources were discussed at this time. If a participant discussed ways to adapt an activity (e.g., rollerblading using a walker, walking along shorter trails), people supports and various community sites and facilities that would accommodate these needs were often discussed and explored at this time. Also, attitudinal barriers were often discussed while addressing ways to adapt activities

(e.g., some participants knew an activity could be pursued with appropriate adaptations, but were concerned about self-image).

A second theme that reflected the person-centred approach was participation in group versus individualized meetings (for two sessions only). Participants could choose whether they wanted to attend any of the two group sessions offered. Eight participants attended the first group session and six participants attended the second one. This represents roughly 50% of the experimental group. Both sessions required 90 minutes instead of the 120 minutes planned, and this time was sufficient.

The third theme that reflected the person-centred approach was the varied program lengths and intensities. Specifically, participation ranged from 3 visits in 6 weeks to 7 visits in 6 weeks (excluding 4 weeks of fading) and from 30 to 120 minutes per meeting. Only one participant told the researcher that the program dragged on too long. This participant completed the program in 7 visits over 6 weeks. Interestingly, this participant had another physical impairment since infancy and acquired SCI in adulthood.

Another theme derived from the researcher's field notes was the logistical problems that diluted program intensity. First, there were program delays associated with coordinating group activities. For example, one participant met with the researcher twice in order to identify new activities of interest and review related information resources. He specifically wanted to pursue SCUBA diving during the program, but had to wait four weeks before participating because other participants were also interested in this activity, and it was more feasible for the SCUBA diving school to organize a group lesson. The school needed time to coordinate volunteers and pool time, and two weeks were needed for the participants to obtain written medical approval to participate. Since there was no

need to meet with the participant during this four-week wait, the program was less intensive for him. Telephone contact, however, was maintained.

Second, there were scheduling problems associated with accommodating all participants' meeting time preferences. Most participants were available to meet only during afternoons and only on certain days of the week. This, in conjunction with the time required for the researcher to travel to and from meetings with participants, made it difficult to schedule more than two or three participants on a given day. To complicate this problem, participants sometimes postponed scheduled meetings because of last-minute medical appointments, family visits, work-related appointments, or bowel problems. Given that other participants were scheduled to meet with the researcher in the same week, meetings could not be rescheduled until the following week. Consequently, it was unrealistic for the researcher to individually meet with all participants in a given week, as intended, and this diluted program intensity.

The field notes also highlighted that all participants were particularly interested in reviewing leisure-related information resources. Prior to the program, the researcher had compiled two binders full of a great variety of brochures, leisure guides, and written information and pictures from magazines, newsletters, and the internet on activities, adaptive equipment, and community programs and resources. These resources were extremely well received by participants. In fact, all participants requested photocopies of personally relevant information from these binders. Many participants commented that they had no idea there were so many activity options for people with disabilities and were amazed by some of the adaptive equipment available. Similarly, many participants were

unaware of accessible recreation programs and facilities, scholarships and fee waiver provisions within Winnipeg.

Finally, reciprocity was a theme. This refers to an exchange; the opportunities to both give and take. For example, the group sessions provided opportunities for participants to share ideas and information, and to support each other. Also, one participant had painted a picture and gave this to the researcher. The participant's wife also made the researcher a pie. Another participant ordered in lunch for himself, his spouse, and the researcher during a one-to one meeting. Two participants made coffee for the one-to-one visits with the researcher. One participant made wooden cardholders for two other participants in the program. Finally, one participant and her spouse drove another participant to the equestrian stable, where both participants tried horseback riding.

Helps and Hindrances in Adjustment to Disability

At the end of the study, all participants were invited to offer their opinions about adjustment to disability. Specifically, they were asked to comment on factors that helped and hindered them in learning to live with disability. Several themes were revealed through cross-case analysis of participant responses.

Helpful Factors in Adjustment to Disability

The two most prominent factors that helped participants in adjustment to disability were family and friends. Ten people responded that understanding, accommodating, and encouraging family and friends were very important sources of support to them. Nine participants commented that factors related to community access

were important (e.g., exercise facilities, work place, education, handi-transit, personalized van and driver). Seven participants mentioned that personal attitude and will were significant factors. For example, it was important for people to have a strong, persistent will, to not worry about uncontrollable things, to challenge oneself, and to not let others' discouraging attitudes and comments get them down. Five participants said financial security and helpful people (e.g., neighbours, the general public) were important. Four participants mentioned that home accessibility, encouraging health professionals, and role models/peers who inspired them and provided advice and information about living with SCI were important factors in adjustment. Activity (e.g., regular exercise, volunteering, travelling), good attendant care, ability to drive a vehicle, mobility aids (power wheelchair), and CPA were each mentioned three times. Factors mentioned twice consisted of employment, experiencing physical improvements during rehabilitation and beyond prognosis, and the leisure education program. Comments specific to leisure education were "it made me aware of things that are out there and led me to other things", and "it gave me a push to try". The remaining factors were each mentioned once and consisted of experiencing success that breeds self-pride, church (i.e., religion), CPA newsletters, and ability to perform activities of daily living.

Hindrances in Adjustment to Disability

Decreased ability/increased dependence on others to help in activities of daily living and other activities (e.g., exercise, driving) were hindrances for eight participants. Both chronic neurogenic pain and painful spasms limited activity and sleep for six participants. Six participants commented that inaccessible and inconvenient physical spaces were a problem (e.g., snow, inaccessible rural facilities, lack of accessible exercise

facilities in south Winnipeg, and parking that is too distant from the work place).

Discouraging attitudes of health professionals were mentioned four times. In particular, participants said health professionals were “narrow-minded”, “talked down to me and assumed I wasn’t motivated”, “didn’t listen to me as the expert on my needs”, and “put doubts in my mind...questioned whether I should do certain activities”. Similarly, four participants talked about the discouraging attitudes of other people. These attitudes, however, reflected a misunderstanding of SCI. For example, participants with incomplete SCI remarked that other people did not see the invisible aspects of their disability (e.g., sensory impairments and fatigue) and so expected them to be able to function as they did pre-injury. Another participant remarked that people who associate physical disability with mental disability have said to him, “you don’t sound disabled”. Four participants commented that internal battles/emotions/attitudes were hindrances in adjustment as well. For example, one participant said it was a struggle “when you let things get to you” and another person indicated that lack of confidence both before and after SCI acted as a hindrance in adjustment to SCI. Two people talked about the psychological realization that they would have no further physical gains and how recurrent depressive episodes have followed this realization. In addition, these two people said they experience fear and discomfort in public because people stare and “look at you differently”.

Factors mentioned twice were decreased leisure activities with friends and family, rude people (in general), and medical/surgical problems. The remaining factors were each mentioned once and consisted of slow physical progress, lack of information/brochures about community resources provided during rehabilitation (therefore, had to seek out information after discharge and as problems occurred), aging and SCI, fatigue, unreliable

attendant care, lack of community-based follow-up (i.e., felt cut-off from therapies after discharge from rehabilitation hospital), “people who want to do everything for you instead of letting you struggle to learn”, job hunting (lack of employment experience), and delays in community-based service coordination and delivery.

DISCUSSION

The purpose of this study was to determine whether a leisure education program would enhance adjustment to disability of adults with SCI living in the community. A modified version of the CRP (Bullock & Howe, 1991) leisure education intervention did not have a statistically significant effect on five measures of adjustment, which consisted of life satisfaction, depression, perceived control, perceived leisure control, and leisure satisfaction. These findings are consistent with research that found leisure satisfaction (Searle & Mahon, 1994), perceived control (Searle et al., 1995; Zoerink, 1998) and perceived leisure control (Searle & Mahon, 1991) were not significantly effected by leisure education interventions, and inconsistent with research that found leisure satisfaction (Mahon & Martens, 1996; Zoerink & Lauener, 1991), life satisfaction (Bedini et al., 1993; Mahon & Searle, 1994; Searle et al., 1995), perceived leisure control (Searle et al., 1995), and perceived control (Bedini et al., 1993) were significantly effected by leisure education interventions.

Although parametric findings were not statistically significant, the main effect trends of the experimental and control groups suggest the leisure education program may have accounted for a slight increase in both life satisfaction and leisure satisfaction, and a slight decrease in depression. Since these dependent variables, which may be said to resemble happiness, showed slight positive changes in the experimental group and slight negative changes in the control group, it is reasonable to suggest that the leisure education program may have accounted for a slight positive effect on happiness in the experimental group. These findings are somewhat consistent with studies that that

demonstrated that leisure education had a positive effect on leisure satisfaction (Mahon & Martens, 1996; Zoerink & Lauener, 1991) and life satisfaction (Bedini et al., 1993; Mahon & Searle, 1994; Searle et al., 1995). In contrast, the main effects for perceived control and perceived leisure control showed very slight increases in both the experimental and control groups, indicating that the leisure education program had no detectable effects on perceptions of control. Taken together, the results above do not support the hypotheses in this study because the findings were not statistically significant.

The results may be explained by a variety of reasons. First, it is possible the results were not statistically significant because the sample size may have been too small for ANCOVA to detect small differences that may have occurred. In this study, 5 of 30 participants were lost to attrition, and the remaining 25 participants may not have been a large enough sample size to detect any small differences.

Second, the program may not have been intense or long enough for some participants in order to have had a significant effect on adjustment. While the intent was to meet with each participant for 60 to 90 minutes weekly, meetings averaged 80 minutes every week and a half and the average number of visits was 5 (range = 3 to 7 visits) over 7.33 weeks (range = 5 to 10 weeks) plus 4 weeks of fading. This program was less intense, in part, because of delays that resulted from scheduling complications with participants and with community programs. Instead of meeting every week with each participant, meetings sometimes were postponed to the following week, which prolonged the program but diluted it. This compares to other studies (e.g., Mahon & Searle, 1994; Searle & Mahon, 1991) that delivered more intensive leisure education programs consisting of one hour a week for 8 weeks. These programs, however, were provided in a

day hospital setting (i.e., one setting), where scheduling complications would not have been as problematic as they were in the present study.

The program also may not have had a significant impact because of a lack of actual participation in planned leisure activities by some participants. Leisure participation has been shown to be directly related to life satisfaction (Peppers, 1976; Ragheb and Griffith, 1982; Riddick, 1985; Tinsley, 1984; Coyle et al, 1993), leisure satisfaction (Ragheb & Griffith, 1982), and perceived leisure control (Searle et al., 1995) and indirectly related to depression (Coyle et al., 1993; Gordon, 1982; MacDonald et al., 1987; Siosteen et al., 1990). Although leisure participation was incorporated into the design of the CRP leisure education model and was greatly encouraged by the researcher, not all participants followed through in this regard. Some participants pursued several of their chosen activities, but others did not participate in any of their identified activities of interest during the course of the study. Also, participants who did follow through on planned activities did not necessarily continue beyond the first trial.

Several barriers, alone or in combination, may have accounted for the lack of leisure participation in the present study. First, those who participated in one or two activities were unable to participate in all of their chosen activities during the program. For example, one participant who was interested in trying six new activities followed through with one activity, but was still in the process of having adaptive equipment made for two other activities by the end of the study. This participant met with the researcher 6 times over 10 weeks (plus 4 weeks of fading), and although he articulated plans to follow through on remaining activities, a longer program would have ensured that support to participate was available when the adapted equipment was ready. The program would

have had to be lengthened by at least 8 weeks, however, before the adaptive equipment was scheduled to be ready. Similarly, the program could have been longer to accommodate activities that could not be scheduled until after the study ended, but again, this would have required a significant extension of 8 weeks or more. It is also important to note that extending the program in order to acquire/make adaptive equipment or to accommodate seasonal activities may have also diluted program intensity.

Lack of leisure participation may also have resulted from medical complications including neurogenic pain and bowel and bladder management problems. These problems were substantial and could not be addressed within the scope of the leisure intervention. Lack of companionship also prevented leisure participation in this study. Although participants with similar interests (e.g., card playing, fishing) expressed interest in participating together and were encouraged by the researcher to do so, they did not follow through in this regard. These findings support the results of Caldwell et al. (1994/95), who delivered a group-based leisure intervention to persons with SCI and recommended that social support needed to be systematically addressed when participants transferred to the community environment after discharge.

Financial constraints may also have accounted for a lack of leisure participation in this study. Participants who required expensive adapted equipment such as handcycles and custom-made horseback riding saddles simply could not afford them. Recreation facility memberships and lessons in SCUBA diving and horseback riding were expensive as well. These findings support the Active Living Alliance for Canadians with Disabilities (1998, p.6), which indicates that “cost can be a significant barrier to participating in physical activity because most (people with disabilities, sic) earn much

less than the average annual income. This is, in part, because having a disability in Canada means that a person is much less likely to be employed". In the present study, only one third of the participants in the leisure education group were employed and 25% of the group had an average income of \$20,000 or less per year.

Pearson Correlations

As expected, Pearson correlations indicated that leisure satisfaction, life satisfaction, perceived control, and perceived leisure control were all positively correlated with each other and that life satisfaction, leisure satisfaction, perceived control, and perceived leisure control were each negatively correlated with depression. These relationships are consistent with that described in the assumptions of this study and with previous research that indicates that perceived control has a strong positive relationship with life satisfaction in SCI populations (Crisp, 1992; Decker & Schulz, 1985; Fuhrer et al., 1992; Schulz & Decker, 1985), that perceived control is negatively correlated with depression (Birchwood, Mason, MacMillan, & Healy, 1993; Crisp, 1992; Decker & Schulz, 1985; Devins et al., 1986; Morris, Morris, & Britton, 1989; Schulz & Decker, 1985; Schulz, Tompkins, Wood, & Decker, 1987; Wallhagen, 1993), and that leisure satisfaction is positively correlated with life satisfaction (Coyle et al., 1993; Coyle et al., 1994; Kinney & Coyle, 1992; Ragheb & Griffith, 1982; Sneegas, 1986).

It was intriguing to compare pre- and post-test correlations and discover that life satisfaction, depression, and perceived control were more strongly correlated with each other and with leisure satisfaction and perceived leisure control at post-test than at pre-test. It may be said that the first three variables resemble psychological well being and the

latter two variables resemble leisure well being. Given this, it is reasonable to suggest that psychological well being and leisure well being were more strongly correlated at post-test than at pre-test. These findings may indicate that the five dependent variables were interpreted and measured by participants as two separate constructs at pre-test (i.e., life satisfaction, depression, and perceived control as one construct, and leisure satisfaction and perceived leisure control as a second construct), and that participants interpreted and measured all five variables as one construct at post-test. There is no certain explanation for why this assimilation of variables occurred, but speculations include (1) participants answered the post-test battery in a way that they believed the researcher wanted them to answer (i.e., to incorporate feelings about leisure when answering all five questionnaires within the test battery), (2) the leisure education program caused participants to associate leisure well-being with psychological well-being, and (3) some unknown variable caused the assimilation of dependent variables at post-test.

It was interesting that leisure satisfaction was more strongly correlated with life satisfaction and depression at post-test than at pre-test. Although causal conclusions cannot be made with correlations, the increase in strength of association from pre- to post-test supports a closer relationship of leisure satisfaction to both life satisfaction and depression after the leisure education intervention was delivered. These results partially support the hypotheses in this study in that leisure satisfaction, a secondary indicator of adjustment, was predicted to increase along with life satisfaction, a primary indicator of adjustment to disability. Similarly, leisure satisfaction was predicted to increase as depression, a primary indicator of adjustment to disability, decreased. These patterns are

consistent with the non-significant trends of the main effects for leisure satisfaction, life satisfaction, and depression.

It is important to note that the data were analysed in light of findings that indicated there were no significant differences between the control and experimental groups on any of the demographic variables listed in Table 3.1. This indicates that the two groups were similar and thus, the demographic variables likely did not confound the main effect findings. Consequently, it is reasonable to suggest that the leisure education program may have accounted for the slight increase in both leisure satisfaction and life satisfaction, and the slight decrease in depression. As with the five measures of adjustment, however, it is possible that the sample size was too small for ANCOVA to detect small differences on the demographic variables. For example, marital status showed the greatest difference between groups, $F = .111$, $p < .05$, and ANCOVA may have detected a significant difference in a larger sample size. Hence, a conservative conclusion cannot entirely rule out the possibility that marital status or other demographic variables were confounds in this study. Despite this caution, the leisure education program can better explain the main effect trends, especially since these findings are quite consistent with past leisure education research.

Social Validity Questionnaire

The results from the social validity questionnaire indicated that participants experienced (1) increased understanding of self and the value of leisure, (2) increased leisure knowledge (e.g., how to adapt activities and plan for leisure, knowledge of leisure opportunities and resources), (3) increased confidence and motivation to participate in

leisure activities, (4) satisfaction with leisure (e.g., sense of achievement, successful and positive experiences, happiness), and (5) barriers that limited leisure participation.

The first four themes reflect factors that contribute to leisure satisfaction, as demonstrated by prior research and as illustrated in Figure 5.1. First, leisure values and knowledge of leisure resources are significant determinants of leisure satisfaction (Beard & Ragheb, 1980; Green, Kreuter, Deeds, & Partridge, 1980; Riddick, 1986), and are related to motivation, which can also support leisure satisfaction (Green et al., 1980). Leisure satisfaction has been attributed to self-confidence and leisure enjoyment (Mahon & Martens, 1996), and Dixon (1979) explained that leisure is more satisfying when people succeed. Similarly, Iso-Ahola (1980) suggests that leisure satisfaction results from feeling competent in activities.

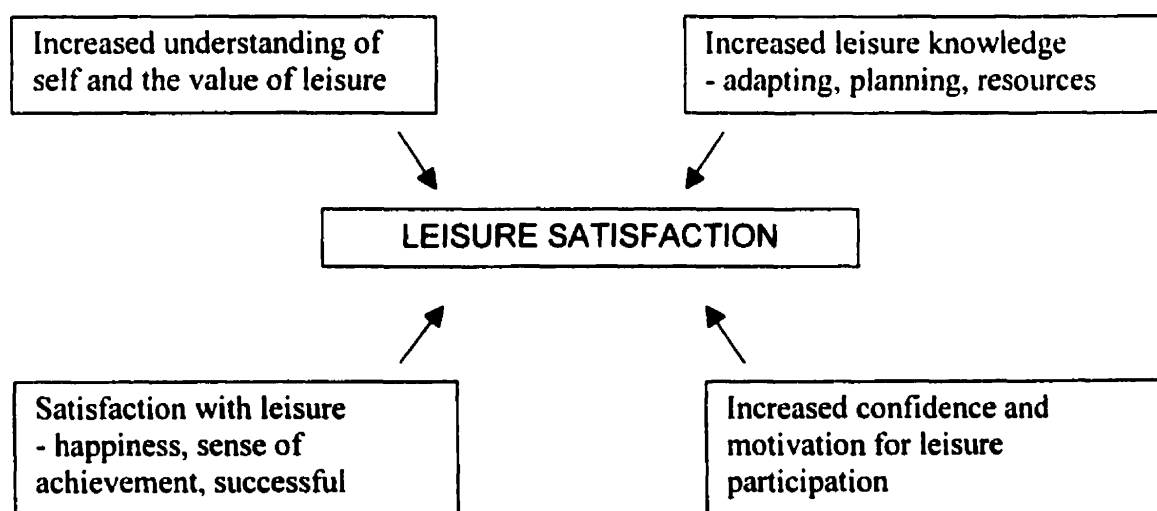


Figure 5.1. Factors that contribute to leisure satisfaction.

It is also important to recognize that the fifth theme, barriers that hindered leisure participation, may have negatively impacted leisure satisfaction since Ragheb and Griffith (1982) found that leisure participation was linked to leisure satisfaction. Even so, indications that leisure satisfaction may be effected more by the attitude and state of mind of participants than by leisure participation (Ragheb, 1993) suggest that leisure participation may not have been as crucial a determinant of leisure satisfaction than the the first four themes, which reflect attitude and state of mind of participants. The findings from the social validity questionnaire, therefore, support the leisure satisfaction main effect trends, indicating that the leisure education program may have had a slight positive impact on leisure satisfaction in this study.

The social validity findings also support a theory proposed by Green et al. (1980) that suggests leisure satisfaction is influenced by predisposing factors, enabling factors, and reinforcing factors. First, predisposing factors include leisure values and knowledge of leisure opportunities, which relate to the motivation of a person and can support leisure satisfaction. In the present study, leisure values and knowledge of leisure opportunities and resources were enhanced through the leisure education program, which motivated some participants to act on their leisure interests. Second, enabling factors such as income relate to resources that hinder or facilitate leisure activity and satisfaction. In the present study, resources such as adapted equipment and finances influenced leisure activity and satisfaction of participants. One participant was frustrated by the lack of adapted equipment and the expense of lessons in horseback riding, whereas another participant had the financial resources required to pursue sailing lessons (even though this did not materialize). These resources acted as enabling factors that enabled or hindered

leisure. Finally, reinforcing factors also may hinder or facilitate leisure satisfaction and include stress and social support in leisure. Green et al. (1980) suggest that stressful events, for example, may limit one's ability and frame of mind to pursue leisure.

Reinforcing factors were very evident in the present study. Stress related to pain, bowel and bladder problems, and lack of social support (i.e., companionship) discouraged some participants so that they did not possess the frame of mind necessary to pursue leisure interests.

This study, therefore, supports the theory of Green et al. (1980), indicating that leisure satisfaction is influenced by predisposing factors, enabling factors, and reinforcing factors. It is important for leisure professionals to recognize that healthy leisure values and knowledge of leisure opportunities are predisposing factors of leisure satisfaction that may motivate persons with SCI to participate in leisure activities, that income and adapted equipment are resources that may enable or hinder leisure satisfaction, and that both social support and stress (e.g., related to neurogenic pain and medical complications) act as reinforcing factors in leisure satisfaction of persons with SCI.

The social validity results corroborated the earlier findings on perceptions of control. Specifically, the presence of leisure barriers prevented leisure participation, and thereby may have hindered perceptions of control for some participants. Participants referred to pain and bowel management problems, expensive adapted equipment, and personal attitudes (e.g., unwillingness to change) that limited leisure participation. Perhaps a longer leisure education program and fewer participants for the researcher to attend to would have provided better opportunities for some of these barriers to be addressed.

It is interesting to note that Searle et al. (1995) suggested that both freedom of choice and leisure participation may have positively impacted perceived leisure control of adults in their study. Others (Langer & Rodin, 1976; Mactavish & Searle, 1992; Rodin & Langer, 1977) also suggest that provision of choice positively effects perceptions of control. In the present study, participants had the freedom to choose activities, but faced barriers as noted above that may have limited both choice and leisure participation. Similarly, it is possible that the barriers experienced by participants may have contributed to a feeling of helplessness, which is negatively related to perceived control (Seligman, 1975; Trieschmann, 1988).

The importance of the leisure education program was evident in the findings of question five of the social validity scale. All but one participant said they would recommend the program to family and friends. One third of the participants specified that the program would be most relevant to people with disabilities, and this is consistent with the intent of the CRP model. The person who negatively responded to this question explained that although she had acquired SCI in adulthood, she had lived with disability (a physical disability similar to SCI) since infancy and so had already adapted. Her comment is interesting because it also supports the CRP model, which was designed for people with acquired neuromuscular disabilities, not congenital disabilities (or infancy-acquired disabilities). This participant, therefore, should not have been included in this study. In addition, one participant who had been living with SCI for about 7 years and was already quite active felt that the program would be most useful for people with more recent injuries and those who were not very active. This comment supports the finding on time since injury and leisure satisfaction, which suggests that people become more

satisfied in leisure with increased time since injury. It also reinforces that CRP may have its greatest impact during the early stages of community re-entry. Finally, one participant noted the relevance of the program for all people, regardless of ability, because what was learned could be extended into everyday life for anyone. This observation is consistent with scholars (Dunn, 1981; Mundy, 1998) who suggest leisure education can be applied to all individuals regardless of whether they have illness or disability.

Question six's findings reveal unanimous support for the value of peer counseling in this program. In other words, it was important to the participants that the leisure educator had SCI. Participants felt understood, a sense of trust and a natural bond that could not be replaced by someone without SCI. Also, some participants considered the program leader as a role model, especially in relation to leisure activities. For example, two participants commented that since the program leader could do activities, they could do them too. Consequently, it is quite likely that the peer relationship was a source of encouragement and motivation for participants to address barriers, and plan and pursue leisure activities. Unfortunately, this study did not control for the effects of peer counseling and so its influence in the trends of the main effects explained earlier is unknown. It is possible, therefore, that peer counseling was a confounding variable in this study.

Field Notes

The researcher's field notes lend further support to findings already discussed, and perhaps more importantly, provide new information about program content and delivery. It appears that the modified nondirectional design of the CRP made sense in this study. The researcher noted that most participants spent more time addressing Units 1 to

5 and that Units 6 to 11 were inevitably incorporated at varying stages within these 5 units. Barriers, people, personal and community resources (Units 6, 9, 10, 11) often were mentioned during discussions on ways to make activities happen (Unit 5) and even earlier for some participants. This approach was logical, since many of these issues participants faced in pursuing leisure were interrelated.

The field notes also supported a person-centred approach to program delivery. Some participants wished to address all units within the program, and others expressed interest in addressing only some of the units. For example, three participants who were employed or going to school only were interested in identifying activities of interest, obtaining information on how to and where to pursue them, and obtaining the researcher's help to coordinate activities because they had little time to seek out opportunities and then coordinate them. This approach supports Bullock and Mahon (1997), who suggest that the unique needs of the individual should determine not only the number of components addressed, but also the order in which these components are introduced. Similarly, these findings support Chinn and Joswiak (1981), who indicated that leisure education programs may focus on several components or address a single educational component.

The field notes also supported the incorporation of group-based leisure education sessions, but not for all participants. The two group sessions were not desirable or workable for all participants and so individualized sessions better met their needs. The majority of those who attended the group sessions seemed to enjoy the camaraderie and discussions, and sharing of ideas and information. Overall, the combination approach of group and individualized sessions seemed to meet the different needs of participants and

therefore supports scholars (Bullock & Mahon, 1997; Dunn, 1981) who suggest that the leisure education process should be tailored to individual needs.

Findings that indicate the leisure-related information resources were well received by participants suggest that the binder presentation was an effective strategy to increase participant's leisure awareness, knowledge, and motivation to explore activities. It was particularly convenient for one-to-one meetings. Other strategies might include having participants compile a personalized binder or file with brochures, pictures, and magazine articles that highlight their activities of interest and community resources that may help them. Slide shows portraying adapted activities, equipment modifications, and leisure programs and facilities may be an effective strategy in group sessions.

Also, opportunities for reciprocity, within both group and one-to-one meetings, were a positive aspect in the leisure education program. Purcell and Keller (1989) indicate that reciprocity fosters a sense of control and that this contributes to satisfaction in leisure. They indicate that the exchange of listening, informing, and supporting helps to develop closeness in a group and provides participants with a sense of control and reciprocity. They encourage leisure practitioners to create feelings of reciprocity by graciously receiving information and even small tangible gifts, nurturing reciprocal relationships between participants, introducing participants to compatible others and continuing to support these relationships as they grow. Although all of these tactics were used in this study, the researcher needed more time to nurture and support relationships between compatible participants.

Problems were also highlighted in the field notes. These included the frustrations associated with scheduling individual participants on a weekly basis and delays

associated with coordinating participant activities with community program schedules. These problems resulted in a less intense program than was intended, suggesting that it is important to consider the complexity of scheduling regular meetings with many participants in a community-based and individualised leisure education program. It may be possible to minimize scheduling difficulties and deliver a more intensive program if there were fewer participants, but delays associated with community program schedules are less controllable and, in fact, should be expected in individualized programs.

The most apparent problem was that of barriers to leisure participation. Some of the barriers such as pain, bladder and bowel management problems, financial constraints, lack of companionship, and attitudes of persons with incomplete injuries (i.e., concerns about self-image) were significant and could not be easily addressed within the scope of the leisure intervention. Indeed, the multitude of barriers faced by persons with SCI underscores why leisure is problematic in this population.

It is interesting that one barrier, concerns about self-image expressed by persons with incomplete SCI, speaks to the conceptual framework for the CRP, which includes normalization and social valorization theory (Wolfensberger, 1972, 1985). According to Bullock and Howe (1991, p. 9), "social role valorization theory posits that successful re-integration consists of both personal adjustment" as well as "actual valued (by society) social participation by individuals" (Wolfensberger, 1985, p. 71). It seems that persons with incomplete injuries perceive that society would not value them if they appeared to be more physically disabled by using conspicuous adapted recreation equipment. This finding suggests, ironically, that this population may be less successfully reintegrated into the community by refusing to use adapted equipment that enables leisure participation.

Since Bullock and Howe state that successful reintegration consists, in part, of personal adjustment, this finding also suggests that persons with incomplete SCI may have more difficulty in adjusting to SCI. Overall, Bullock and Howe's suggestion that recreation and leisure may be an effective way to promote social interaction and societal acceptance for persons with disabilities who have recently returned home and experienced large amounts of free time may be a more complicated scenario for persons with incomplete SCI. Future research could study social role valorization theory in relation to adjustment of ambulatory persons with incomplete SCI and those who use wheelchairs.

The findings on barriers in this study indicate that strategies need to be incorporated into leisure education interventions to better address them. For example, one useful strategy to address lack of companionship may be to incorporate group-based social activities within leisure education programs, and for the program leader to gradually fade involvement as natural friendships within the group develop. Similarly, the program leader could initiate and help coordinate leisure opportunities that interest two or more participants, accompany them for several sessions if needed, and then gradually fade involvement until participants feel comfortable continuing on their own. Another approach may be to identify community programs that will utilize the same strategy as described above.

In addition, future studies may consider extending programs to a 6 or 8 month period for some participants. The first several weeks could be more intensive in terms of identifying activities, conducting activity analyses, ordering/making adaptive equipment (and acquiring financial resources for purchase of expensive equipment), identifying barriers, and making plans to participate in activities. The latter months of the program

could consist of more focused efforts in addressing barriers and more participation in planned activities.

Factors that Help and Hinder Adjustment to Disability

Statistical analyses of the demographic variables and the five measures of adjustment to disability at pre-test were done to compare results with prior research on factors related to adjustment. This examination revealed some interesting findings. First, gender was a significant factor in life satisfaction, depression, and perceived control, with males scoring higher adjustment than females. These findings are contrary to the finding of Woodrich and Patterson (1983), who found that females were better adjusted than males, and reinforces the recommendation of Trieschmann (1988) for more research on gender and adjustment to SCI.

Second, level of injury was a significant factor in depression. Though this finding is contrary to most SCI research, it supports the work of MacDonald et al. (1987), who found that 86% of persons who were clinically depressed according to the Clinical Depression Measure (Breiter, Dobson, & Shaw, 1983) were quadriplegics, whereas only 14% were paraplegics. It also supports Decker and Schulz (1985) and Schulz and Decker (1985), who found that there was a tendency for persons with greater disabilities to report lower levels of subjective and psychological wellbeing, although their correlations were not high. The findings on level of injury in the present study also support Trieschmann's (1988) suspicion that the demands and circumstances of life for quadriplegics and paraplegics are different and, thus, types of coping styles may vary.

It is interesting to note that pre-test depression levels on the CES-D (Radloff, 1977) for the participants in this study were higher (mean = 16.27) than persons with SCI in Coyle et al.'s (1994) study (mean = 13.92) and higher than persons in a non-disabled community sample (mean = 9.25) (Radloff, 1977). It is likely that the volunteer sample in the present study accounted for these higher depression levels. In other words, persons who were having adjustment difficulties or could benefit from leisure intervention services were targeted to participate in this study, whereas the other samples were randomly selected and represented the population of all persons with SCI living in the community. Regardless, these findings seem to support Coyle et al.'s (1993, 1994) contention that persons with SCI are at an elevated risk for depressive episodes post-rehabilitation.

Finally, time since injury was only significant for leisure satisfaction and suggests that people with SCI can have a more satisfying leisure lifestyle as time since injury increases. This may reflect, as suggested by one participant in the social validity questionnaire, that people learn to overcome leisure barriers and become more active with greater experience in living with SCI. It also may reflect that leisure is not typically addressed until the later stages of the rehabilitation continuum; until after independent living, vocational, and work issues are addressed. These findings suggest that rehabilitation programs should introduce leisure education programs earlier in order to facilitate leisure satisfaction earlier after SCI.

In addition to statistical analyses of factors related to adjustment to disability, participants were asked an open-ended question pertaining to factors that helped and hindered them in learning to live with their disability. Positive themes derived from

responses consisted of (1) supportive family and friends, (2) community access, (3) personal attitude and will, (4) financial security, (5) helpful people, (6) home accessibility (7) encouraging health professionals, (8) role models/peers, (9) activity, (10) good attendant care, (11) ability to drive a vehicle (12) mobility aids, and (13) CPA.

In contrast, factors that hindered adjustment consisted of (1) decreased ability/increased dependence on others to help with activities, (2) pain, (3) inaccessible environments, (4) discouraging attitudes of health professionals and people in general, (5) internal battles/emotions/attitudes, (6) decreased leisure activities with friends and family, and (7) medical/surgical problems.

Overall, the above findings largely support the literature on adjustment to disability and clearly support scholars (Krause, 1992a; Krause & Crewe, 1991; Trieschmann, 1988; Whalley Hammell, 1992) who suspect that too much emphasis has been placed on personal factors in adjustment to disability and not enough emphasis has been placed on environmental factors as being critical in adjustment. Although personal factors (e.g., attitude, will, confidence, motivation, pain, fatigue, medical/surgical complications, ability, and sensation) were mentioned frequently by participants, environmental factors (e.g., other people's attitudes, architectural barriers, transportation, employment, mobility aids, attendant care, and support from family and friends) were just as critical. Consequently, Trieschmann's definition of adjustment to disability as a balance of the mind-body system within the environment in which it lives seems to be strongly supported in this study. In addition, these findings support claims that adjustment to disability is exceedingly complex (Trieschmann, 1988), dynamic (Krause,

1992b; Trieschmann, 1988), specific for each individual, and dependent on several different factors (Stensman, 1994).

Perhaps most relevant to this study may be that leisure education is designed to have its greatest effect on personal factors related to adjustment to disability of an individual such as attitude, confidence, motivation, and ability (i.e., skill development, activity adaptations). Since leisure education is a contextualized process, it is not designed to change most factors in the environment that influence adjustment to disability, but rather to work within the environment that already exists. Exceptions, however, may include that of supporting and nurturing new friendships through leisure activities and making leisure-related information resources readily available for participants. Interestingly, Diesner (1999) recently discussed personal and environmental factors in relation to leisure education, and recognized the scope of leisure education as being mostly limited to that of personal factors. These findings support his research by suggesting that the role of leisure education in adjustment to disability of persons with SCI appears to be mostly limited to that of influencing some personal factors. The scope of leisure education, therefore, requires further consideration. For example, leisure education strategies that increase levels of social support should be developed and then examined in relation to adjustment to disability.

Summary and Recommendations

The results of this study suggest that the leisure education program may have had slight positive effects on life satisfaction, depression and, in particular, leisure satisfaction, but that the effects were not strong enough to be statistically significant. No

causal conclusions could be made between the leisure education program and measures of perceived control since both groups experienced slight increases in perceptions of control and the mean difference between the increases was not statistically significant. Without statistical significance, the hypotheses in this study could not be fully supported by these findings.

Social validity findings, however, provided strong support for the role of leisure education in leisure satisfaction and helped explain why perceptions of control did not change significantly at post-test. Field notes highlighted positive and negative aspects of program delivery, and several strategies to improve leisure education programs were discussed. Finally, participants' opinions about factors that helped and hindered adjustment to disability were discussed, and results supported definitions of adjustment that include both personal and environmental factors as being crucial in this process. The potential contribution of leisure education to adjustment to disability was discussed with reference to these findings. It is important to note that the results in this study cannot be generalized to the broader community of persons with SCI because the sample in this study was a volunteer sample that targeted persons who were believed to have problems adjusting to SCI or who could benefit from leisure intervention services.

The implications of this study for community-based leisure education programs for persons with SCI are important to mention. First, leisure education should continue to be delivered in the context of a person's home and community environment, but could include introducing the program just prior to discharge from initial hospitalization and then following each person into the community for several months. This recommendation supports the original CRP model. In the present study, although leisure education was

useful for many participants who were three to seven years post-SCI, it is unfortunate that they were unaware of their community-based leisure options until so many years after injury.

Also, leisure education programs should continue to be tailored to individual needs. The option of participating in one or two group sessions within a mostly individualized program ensures that those who enjoy group programs may benefit from interaction with other participants. It is also important to recognize that community-based, individualized programs are difficult to deliver to a group of participants if the goal is to deliver an intense program.

Alternative study designs that require fewer participants, therefore, should be considered, including single-subject design or case studies. Such studies would also provide opportunities for more in-depth analyses of the role of leisure education in adjustment to disability. In addition, study designs that use statistical data to study the effects of leisure education on adjustment to disability should use qualitative data to complement statistical findings. In this study, qualitative data helped interpret statistical findings and provided a wealth of information worthy of discussion.

Social validity findings helped to explain what aspects of the leisure education program may have contributed to the slight increase in leisure satisfaction in this study. For example, these results suggested that leisure education facilitated leisure satisfaction through understanding of leisure values and knowledge of leisure opportunities. Consequently, these results support recommendations by Riddick (1986) that to facilitate leisure satisfaction, leisure counseling interventions should examine and clarify leisure

values as well as share information about how leisure interests can be pursued in existing programs and facilities.

This study also demonstrated that it may be desirable to incorporate peer counseling as a strategy to help encourage and motivate participants to explore leisure activities. This might satisfy Caldwell et al.'s (1994/95) recommendation to address staff unfamiliarity with what it is like to 'live' in a wheelchair. Perhaps if a program leader does not have SCI, persons with SCI who model active leisure lifestyles can be 'leisure mentors' for participants in leisure education programs. Future research could examine the effects of peer counseling by designing a three-group study, in which one group would participate in a leisure education program that included peer counselling, a second group would participate in the leisure education program without peer counselling, and a third group would serve as the control group.

More research is needed on the role of leisure education in depression. Given the positive correlations of depression with perceptions of control and leisure satisfaction in this study, it is possible that more powerful studies would demonstrate that leisure education may significantly decrease levels of depression or grief after SCI.

As suggested by Mahon et al. (1996, p.210), leisure education programs "must go beyond the first step of leisure awareness and develop the abilities and confidence to take action...". Although some participants in the present study experienced increased self-confidence and motivation to plan and pursue leisure activities, others did not feel able to participate in activities of interest because of barriers. Leisure professionals must develop strategies to better address barriers that limit leisure participation of persons with SCI. Perhaps leisure education specialists could devote more time to building natural supports

and facilitating friendships among participants and in the community. Applying to community foundations or requesting corporate sponsorship for expensive adaptive equipment may provide greater opportunity for leisure participation of persons with SCI. Leisure education programs may need to be extended in order to provide more time to intensely focus on addressing barriers and acquire adaptive equipment. Leisure professionals may have to include fewer participants within each program in order to be able to focus efforts on addressing barriers. Overall, greater creativity needs to be exercised in addressing the barriers that are clearly problematic in the SCI population.

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APPENDIX A

Initial Telephone Contact Protocol

TELEPHONE CONTACT PROTOCOL

"Hello, my name is Audrey McIlraith and I am phoning from the Canadian Paraplegic Association. May I please speak with _____?" (CPA client name)

If CPA client does not answer phone originally...

"Hello, my name is Audrey McIlraith."

Continue...

"I am calling to tell you about a research study that I am undertaking as a graduate student at the University of Manitoba, but is sponsored by the Canadian Paraplegic Association, and to see if you might be interested in participating in it. There will be a total of 30 adult CPA clients from Winnipeg and its immediate surrounding area enrolled in this study. Your name was randomly selected from a list of names that was supplied to me by CPA."

The purpose of this study is to determine the effects of a leisure education program on certain aspects of well being that reflect adjustment to disability of adults with spinal cord injury. Basically, leisure education is a kind of life enrichment program which deals with helping you participate in recreation and leisure activities that you enjoy. This program will focus on community recreation activities, but can also include home-based leisure.

Does this make sense so far?"

Answer questions accordingly and continue...

"The leisure education program will likely last between 8 and 16 weeks, but the actual amount of time required for each person depends upon the issues which need to be addressed. If you agree to participate in this study, you may not necessarily participate in the leisure education program right away. You will be assigned by chance into one of two groups - either a group of 15 people which takes part in the leisure education group, or a control group of 15 people which does not take part in the leisure education program during the course of the study. If you are assigned into the control group, you will still have an opportunity to take part in the leisure education program, but this will be after this study is finished."

Do you think you would like to take part in this study?"

Option 1. If no, thank the person for their time and say good-bye.

Option 2. If yes, set a time to meet in order to review and sign the informed consent form. Say good bye.

APPENDIX B

Informed Consent Form

INFORMED CONSENT FORM

Study Title: Effects of a Leisure Education Program on Adjustment to Disability of Persons with Spinal Cord Injury

Investigator: Audrey McIlraith
Department of Graduate Studies
University of Manitoba
Winnipeg, Manitoba

Introduction:

You are being asked to take part in a human research study (your name was randomly selected from a pool of client names provided by Canadian Paraplegic Association - Manitoba). In order for you to decide whether you should agree to participate, you should understand enough about its risks and benefits to make an informed decision. This process is known as informed consent.

This consent form contains information about the research study, which Mrs. McIlraith has asked you to participate in. Please read this consent form carefully. Once you understand the study and if you agree to take part in it, you will be asked to sign the last page of this form and to initial each page. You will be given a signed copy of this form to keep as a record.

By signing this document, you indicate that you understand the information, and that you give your consent to take part in the research study. Participation is voluntary, so you may refuse to participate in this study, or you can withdraw your consent at any time and this decision will not be held against you. If you decide to withdraw during the study, you may have the results of your participation, to the extent that it can be identified as yours, returned to you, removed from the research record, or destroyed.

Participant Initials _____

Date _____

Purpose of the Research Study:

The purpose of this study is to determine the effects of a leisure education program on certain aspects of well being that reflect adjustment to disability of adults with spinal cord injury. Leisure education is a kind of life enrichment program that helps you participate in recreation and leisure activities that you enjoy. This program will focus on community recreation activities, but can also include home-based leisure. The results of this study will assist in determining any need to modify the leisure education program for use with other adults with spinal cord injury.

Length of Study:

Your participation in this study will likely last between 8 and 16 weeks; the amount of time required is highly individual as it depends upon the issues which each person needs to address and the amount of time which each person needs to spend in the program.

Procedures:

If you agree to participate in this study, you will be asked to attend an initial meeting with the researcher. During this meeting you will be asked to complete a test battery of five questionnaires which deals with a variety of topics related to your well-being (i.e., satisfaction with life and leisure, mood state, perceptions of control in life and leisure). There are a total of 84 questions and it should require about one hour to answer them. The researcher will also ask you some questions about your background during this meeting.

You will be assigned by chance into one of the two following groups:

- (a) leisure education group (total of 15 CPA clients)
- (b) control group (no leisure education) (total of 15 CPA clients).

* If you are assigned to the leisure education group, you will attend two group sessions with other CPA clients who also have been assigned to this group, and you will meet with the researcher once weekly for 1 to 1.5 hours until you have completed the program. You will receive a corresponding participant program guide, which will be used to guide discussions and written exercises during the course of the study. After the study is completed, you will meet one final time with the researcher in order to complete a second questionnaire and to offer your opinions about adjustment to disability. Finally, you will be contacted by telephone by someone other than the researcher and asked some questions about the value of the leisure education program.

Participant Initials _____

Date _____

* If you are assigned to the control group, you will be asked to continue your regular lifestyle during the course of the study. After all participants in the leisure education group complete the program, you will be contacted in order to schedule a meeting for completion of a second questionnaire. During this second meeting, you will complete the questionnaire and will be invited to offer your opinions about adjustment to disability. After completion of the present study, you will have the opportunity to participate in the leisure education program.

Risks and Discomforts:

No risks or discomforts are foreseeable. Every effort will be made to ensure safe participation in your chosen recreation and leisure activities.

Benefits:

The benefits that you may expect from this study include, but are not limited to: social interaction with others, learning how to use your time more enjoyably, learning new leisure skills, and learning about equipment modifications and community resources. The leisure education program will be provided at no cost.

Confidentiality:

The results of your participation will be confidential, and will not be released in any individually identifiable form without your prior consent, unless otherwise required by law. The Canadian Paraplegic Association - Manitoba and The United Way of Winnipeg will have access to the study's overall findings. If the final study data is prepared for publication, your identity will not be revealed in these manuscripts.

Withdrawal:

Your participation in this study is voluntary and if you decide to withdraw from the study at any time, you may do so without penalty or giving up any benefits to which you are otherwise entitled (e.g., other CPA services). You may be discontinued from this study by the researcher for reasons of, but not limited to:

1. consistently missing scheduled meetings e.g., 3 in a row
2. blatant lack of effort or lack of motivation to participate in the program e.g., not wanting to discuss or work on the program units that pertain to your needs.

Participant Initials _____

Date _____

Consent:

1. Audrey McIlraith may review my file at CPA-Manitoba in order to gain background information for use in this study.
2. I have been provided ample opportunity to review this request and ask questions. I understand its contents and voluntarily agree to participate in this study.

Participant's Name (printed)

Participant's Signature

Date

Witness Signature

I, Audrey McIlraith, have explained to the participant the nature of the above study. I hereby certify that to the best of my knowledge, the person who is signing the consent form understands clearly the nature, requirements, benefits, and risks involved in his/her participation.

Investigator's Signature

Date

PLEASE SIGN BOTH COPIES OF THIS FORM. KEEP ONE COPY AND RETURN THE SECOND ONE TO THE INVESTIGATOR.

Participant Initials _____**Date** _____

For more information or to ask questions about this study contact Audrey McIlraith (telephone 275-1360); or contact Dr. Michael J. Mahon, Associate Dean (Research and Graduate Studies) and Director of the Health, Leisure and Human Performance Research Institute, Faculty of Physical Education and Recreation Studies, University of Manitoba (telephone 474-8770).

APPENDIX C

Test Battery

TEST BATTERY

Name: _____ Date _____

Directions: Below you will find some statements about yourself. We would like to know how you feel about each statement. People differ widely in the way they feel about each statement. There are no right or wrong answers.

Please read each of the following statements and circle the response that best reflects your feelings about each statement.

- | | |
|--|--------------------------|
| 1. I am just as happy as when I was younger. | Agree Disagree Undecided |
| 2. These are the best years of my life. | Agree Disagree Undecided |
| 3. My life could be happier than it is now. | Agree Disagree Undecided |
| 4. This is the dreariest time of my life. | Agree Disagree Undecided |
| 5. Most of the things I do are boring or monotonous. | Agree Disagree Undecided |
| 6. Compared to other people, I get down in the dumps too often. | Agree Disagree Undecided |
| 7. The things I do are as interesting to me as they ever were. | Agree Disagree Undecided |
| 8. I have made plans for things I'll be doing a month or a year from now. | Agree Disagree Undecided |
| 9. Compared to other people my age, I make a good appearance. | Agree Disagree Undecided |
| 10. As I grow older things seem better than I thought they would be. | Agree Disagree Undecided |
| 11. I expect some interesting and pleasant things to happen to me in the future. | Agree Disagree Undecided |
| 12. I feel old and somewhat tired. | Agree Disagree Undecided |

13. As I look back on my life, I am fairly well satisfied.	Agree Disagree	Undecided
14. I would not change my past even if I could.	Agree Disagree	Undecided
15. I've gotten pretty much what I expected out of life.	Agree Disagree	Undecided
16. When I think back over my life I didn't get most of the important things I wanted.	Agree Disagree	Undecided
17. In spite of what people say, the lot of the average person is getting worse, not better.	Agree Disagree	Undecided
18. I have gotten more of the breaks in life than most of the people I know.	Agree Disagree	Undecided

Name: _____

Date _____

This survey deals with how you feel about various life circumstances. Please read each of the following items and circle the number according to the response that best reflects your feelings about each item.

Not at All <-----> Completely

1. In general, to what extent do you feel you can achieve or obtain what is important to you?

1 2 3 4 5

2. In general, to what extent do you feel you can make your interactions with people end up the way you expect them to?

1 2 3 4 5

3. Overall, to what degree do you feel you can count on yourself to cope successfully when you're stressed?

1 2 3 4 5

4. In general, to what degree do you feel able to solve problems in your life?

1 2 3 4 5

5. In general, to what degree are the good things that happen to you largely your own doing?

1 2 3 4 5

Name: _____ Date _____

Using the scale below, indicate the number which best describes how often you felt or behaved this way - DURING THE PAST WEEK.

- 1 = Rarely or none of the time (less than 1 day)
2 = Some or a little of the time (1 - 2 days)
3 = Occasionally or a moderate amount of time (3 - 4 days)
4 = Most or all of the time (5 - 7 days)

DURING THE PAST WEEK:

- ___ 1. I was bothered by things that usually don't bother me.
- ___ 2. I did not feel like eating; my appetite was poor.
- ___ 3. I felt that I could not shake off the blues even with help from my family or friends.
- ___ 4. I felt that I was just as good as other people.
- ___ 5. I had trouble keeping my mind on what I was doing.
- ___ 6. I felt depressed.
- ___ 7. I felt that everything was an effort.
- ___ 8. I felt hopeful about the future.
- ___ 9. I thought my life had been a failure.
- ___ 10. I felt fearful.
- ___ 11. My sleep was restless.
- ___ 12. I was happy.
- ___ 13. I talked less than usual.
- ___ 14. I felt lonely.
- ___ 15. People were unfriendly.
- ___ 16. I enjoyed life.
- ___ 17. I had crying spells.
- ___ 18. I felt sad.
- ___ 19. I felt that people disliked me.
- ___ 20. I could not get "going".

Name: _____

Date: _____

This survey deals with how you feel about your recreation and leisure experiences. These include participation in activities such as reading, hobbies and crafts, social activities, music, sports, etc. Please read each of the following items and circle the response that best reflects your feelings about each item.

	Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1. I can do things during a recreation activity to enable other people to enjoy doing the activity with me.	SD	D	N	A	SA
2. I can be as good as I want to be at the recreation activities in which I participate.	SD	D	N	A	SA
3. I can usually convince other people to do the recreation activities I want to do.	SD	D	N	A	SA
4. If someone started an argument with me, I could make them stop.	SD	D	N	A	SA
5. I can do things during recreation activities that will help me make new friends.	SD	D	N	A	SA
6. I can do things during a recreation activity that will improve the skills of other participants.	SD	D	N	A	SA
7. I can make almost any activity fun for me to do.	SD	D	N	A	SA
8. I usually decide who I will participate with during recreation activities.	SD	D	N	A	SA
9. I can make good things happen when I do recreation activities.	SD	D	N	A	SA

10. I can do things during recreation activities that will make everyone have more fun.	SD	D	N	A	SA
11. I can usually persuade people to do recreation activities with me, even if they don't want to.	SD	D	N	A	SA
12. I can make a recreation activity as enjoyable as I want it to be.	SD	D	N	A	SA
13. When I'm doing recreation activities, I can keep bad things from happening.	SD	D	N	A	SA
14. During a recreation activity, I can do things that will make other people better players.	SD	D	N	A	SA
15. I can do things during recreation activities that will make other people like me more.	SD	D	N	A	SA
16. I can enable other people to have fun during recreation activities.	SD	D	N	A	SA
17. I can do things during recreation activities that will help other people win more often.	SD	D	N	A	SA

Name: _____ Date _____

We are interested in understanding your feelings about your leisure. By this we mean how you feel about your leisure, your recreation, or the things you do in your free time. Please answer each item by circling the number which best represents how you feel.

	Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1. My leisure activities are very interesting to me.	1	2	3	4	5
2. My leisure activities give me self-confidence.	1	2	3	4	5
3. My leisure activities give me a sense of accomplishment.	1	2	3	4	5
4. I use many different skills and abilities in my leisure activities.	1	2	3	4	5
5. My leisure activities increase my knowledge about things around me.	1	2	3	4	5
6. My leisure activities provide opportunities to try new things.	1	2	3	4	5
7. My leisure activities help me to learn about myself.	1	2	3	4	5
8. My leisure activities help me to learn about other people.	1	2	3	4	5
9. I have social interaction with others through leisure activities.	1	2	3	4	5
10. My leisure activities have helped me to develop close relationships with others.	1	2	3	4	5
11. The people I meet in my leisure activities are friendly.	1	2	3	4	5

12. I associate with people in my free time who enjoy doing leisure activities a great deal.	1	2	3	4	5
13. My leisure activities help me to relax.	1	2	3	4	5
14. My leisure activities help relieve stress.	1	2	3	4	5
15. My leisure activities contribute to my emotional well-being.	1	2	3	4	5
16. I engage in leisure activities simply because I like doing them.	1	2	3	4	5
17. I pursue leisure activities that are physically challenging.	1	2	3	4	5
18. I do leisure activities that develop my physical fitness.	1	2	3	4	5
19. I do leisure activities that refresh me physically.	1	2	3	4	5
20. My leisure activities help me to stay healthy.	1	2	3	4	5
21. The areas or places where I engage in my leisure activities are fresh and clean.	1	2	3	4	5
22. The areas or places where I engage in my leisure activities are interesting.	1	2	3	4	5
23. The areas or places where I engage in my leisure activities are beautiful.	1	2	3	4	5
24. The areas or places where I engage in my leisure activities are well designed.	1	2	3	4	5

APPENDIX D
Leisure Education Program

LEISURE EDUCATION PROGRAM

Group Session #1 - Program Introduction, Unit 1 and Unit 2 (2.0 hours)

Program Introduction

- | | |
|------------------------|---|
| Objective 1 | Participants will be aware of the session's goals and will meet other CRP study participants |
| Action -
(5 mins.) | Welcome people and describe the plan for this session - i.e., introductions, CRP overview, introduction to participant guide, exploring the meaning and value of leisure, video, group exercises, and starting CRP Units I and II. Also housekeeping items re: refreshments, when break is scheduled, where washrooms are, find out if anyone needs to leave early re: handi-transit. |
| Action -
(20 mins.) | Briefly explain my background (briefly). Have each participant introduce him/herself to other group members by stating name, favourite current activity, and what he/she hopes to gain from this program. |
| Objective 2 | Participants will understand the intent of the CRP and their role in it |
| Action -
(10 mins.) | Review overall leisure education process by referring to both the CRP flowchart and CRP goals (in participant guide) using overhead |
| Action -
(5 mins.) | Distribute participant guides and explain how they will be used
- reference to goals in guide - discussed in previous step
- explain the structure of each unit i.e., explanation of each unit followed by discussion and/or written exercise
- designed as self-study as well - can complete exercises at home between sessions and can read ahead |
| Action -
(2 mins.) | Discuss expectations regarding commitment to and participation in program i.e., if neither motivated nor committed to the program then unlikely to experience progress and success (assumption of CRP is participant motivation) - also remind them that participation is voluntary |
| Action -
(3 mins.) | Provide opportunity for participants to ask questions |

****The order in which the following units are presented reflect the CRP design with some minor modifications by the researcher of the present study. The researcher acknowledges that each person will not necessarily proceed through the program in this linear fashion, with the exception of the scheduled group sessions and the order of the units that will be addressed during them. Ultimately, the individual sessions will address CRP units in an order that is dictated by individual needs.**

Unit 1 "What You Do for Fun"

Objective 1 Participants will become aware of different definitions of leisure

Action -
(5 mins.) Ask participants to volunteer their definitions of leisure. Then ask them to describe the feelings they associate with doing activities that they enjoy (prompt if necessary e.g., relaxation, at peace, lose track of time, thrill, fun, etc.). Explain that these feelings (state of mind/experience) constitutes leisure (according to one definition) and as such, leisure can be therapeutic. Also describe leisure as activity and as free/discretionary time. Emphasize that freedom to choose is key in leisure and may be what helps make leisure enjoyable. Use overhead to outline definitions.

Objective 2 Participants will be able to discuss the potential benefits of recreation on physical and mental well-being.

Action -
(5 mins.) As a group, brainstorm leisure benefits for various categories listed in CRP manual e.g., physical fitness, mental health, independent living, return to work, etc. Record on flip chart (prepare a hand-out summarizing benefits discussed - to be given to participants at next session)

Action -
(20 mins.) Present and show the first 10 minutes of the film (on video) - "Is it Leisure or Lei-zurh?" and discuss key points (in previous program, participants became restless after 10 minutes of film)

Incorporate discussion about pre-injury leisure and post-injury leisure

= 75 minutes

Provide a 10 minute refreshment and washroom break

Objective 3 Participants will be able to identify and describe specific recreation interests.

Action -
(15 mins.) Ask participants to refer to their CRP guides and complete the "Recreation Activity List" - to identify present recreation interests and then to pick 6 activities from this list that they like most (regardless of injury's impact - ask them to 'dream' about what they would like to do and forget about their disability in this process). Solicit feedback re: how many identified pre-injury activities.

Unit 2 "Why You Do It"

Objective 1 Participants will be able to identify and describe the reasons (benefits) for his/her involvement or interest in specific recreation activities.

Action -
(10 mins.) Discuss how different people may participate in similar activities for different reasons e.g., wheelchair basketball for socialization or physical fitness, and then ask each participant to share why they enjoy or have an interest in one of their six chosen activities.

Action - Ask participants to record their motivations/reasons for participating in each of their 6 identified activities ("Recreation Reasons" in participant guide).
(10 mins.)

Wrap-up of Group Session #1

Action - Thank group for their participation and request that they try to complete "Recreation Activity List" and "Recreation Reasons" at home if not finished during this session.

 = 120 minutes

Individual Sessions:

******The amount of time required to complete the CRP units will vary among the participants. A participant may need to spend several sessions to complete one unit, or may be able to complete more than one unit during one session.

Review of Units 1 and 2

Objective 1 Participants will review and/or complete Units 1 and 2

Action - Participants will discuss and review written exercises pertaining to Units 1 and 2 with the researcher. Incomplete exercises will be completed as needed.

Unit 3 "How It's Done"

Objective 1 Participants will be able to analyse the activities and interests identified in Unit 1 and identify the physical, mental, and social skills required.

Action - Discuss the concept of breaking down activities to their basic physical, mental and social skill requirements. Provide an example of an activity that has been analysed as discussed.

Action - Using the "Activity Requirements Form" in the participant guide, assist participants to do their own activity analysis for their 6 chosen recreation interests. Involve family/friends in this process if possible.

Action - Discuss activity components that participants enjoy most e.g., for baseball it might be throwing the ball as far as possible.

Unit 4 "Can You Do It Now?"

Objective 1 Participants will be able to realistically assess current and potential physical and mental capabilities and discuss the implications for recreation involvement in previously identified recreation activities and interests.

Action - Ask participants to identify their own strengths and weaknesses. Include pre-injury and current self-assessments. Guide participants, if necessary, to come to a realistic assessment.

Action - Discuss how these current capabilities will affect involvement in recreation interests, based on the skills required for each activity. Follow with discussion about expectations regarding physical and mental capabilities and such recreation involvement in: one month, two months, six months, one year.

Other Action- Introduce the concept of adaptations to 1) encourage participants after self-assessment of limitations 2) prepare them for the next session. Give them the adaptations and modifications article (in CRP) and ask them to read it prior to the next session.

Unit 5 "Ways to Make it Happen (Can You/Will You Adapt?)"

Objective 1 Participants will be able to describe the concepts of activity adaptation and equipment modification in recreation and give a specific example of an adaptation or modification.

Action - Review and discuss the adaptations and modifications article given at the previous session. Emphasize that many of the skills identified in activity analysis which seem impossible to do with current and/or potential physical/mental capabilities CAN be done with specially modified equipment. Also emphasize how an activity itself can be adapted to account for the inability to perform certain skills.

Action - Bring a variety of resources e.g., pamphlets, pictures, articles and catalogues that present and describe various equipment modifications and ways to adapt activities. Go through these resources with participants so that they may be encouraged with ideas for their own recreational needs. Encourage imagination and ingenuity to come up with their own ideas as well.

Action - Ask participants to provide an example of how equipment modification and activity adaptation can allow someone with a similar disability to participate in a particular recreation activity.

Objective 2 Participants will be able, for each identified interest and activity, to assess the need for and describe equipment modifications and activity adaptations which would enable continued satisfactory participation.

Action - Have participants revisit the "Activity Requirements Form" and choose one activity in which the physical/mental requirements preclude participation. Have participants write these skills down on the "Problem" lines on the back of the form. Then help participants to determine how these skills might be performed with equipment modifications or by adapting the activity as little as possible and record them on the "Changes" line on the back of the form.

Action - Have participants analyse the rest of their identified recreation activities in the same manner, considering both existing adaptations and modifications as well as thinking of new and ideal ones.

Objective 3 Participants will be able, if feasible, to find at least two possible resources for acquiring the modified equipment necessary for continued participation in identified activities or interests.

Action - Using the catalogues and other resources brought in, have participants find specific equipment required or the names of agencies likely to be helpful in acquiring equipment identified.

Action - Have participants describe how modified or adaptive devices, which would enable participation in identified activities, could be made with tools and materials if manufactured devices are not available or affordable.

Action - Make plans to follow through in acquiring adaptive devices identified and to find opportunities to participate in the modified conditions suggested.

Objective 4 Participants will be able to demonstrate, for a chosen recreation activity, the proper use of modified or adaptive equipment necessary for participation in that activity.

Action - After acquiring the identified adaptive devices and/or finding opportunities to participate in a chosen modified activity, provide a demonstration of safety and proper use/rules (or bring someone who can do a proper demonstration).

Action - Have participants practice using the adaptive equipment or trying the modified activity. Teach and encourage family/friends to assist and support participants through this re-learning process. Encourage participants to continue practising outside of the formal program sessions, emphasizing to family/friends how their support may be required to facilitate this.

Action - Plan follow-up visits and/or phone calls, as necessary, to determine mastery and progress.

Note** This process of determining the need for, and availability of, modified recreation equipment and opportunities may be repeated many times for many activities. Locating making or acquiring, and learning to use modified equipment may also be repeated and take several weeks.

During the individual session just prior to Group Session #2, introduce the concept of "Barriers" and ask participants to read the article in their participant guide, which describes three types of barriers.

Group Session #2 - Unit 6, Unit 10, and Unit 11

(2.0 hours)

****This session will be scheduled to occur 4 weeks after Group Session #1. All CRP participants will be asked to attend, regardless of the stage they are at in the program.**

Unit 6 "Barriers"

- Objective 1** Participants will be able to name common barriers to recreational involvement by persons with disabilities.
- Action - (5 mins.)** Briefly review and discuss the concepts of physical, attitudinal, and resource-related barriers, as described in the article that participants were asked to read prior to this session.
- Action - (10 mins.)** Have the group brainstorm a list of common barriers in each of the three categories and then discuss how these barriers can affect recreation participation of individuals with disabilities, both on a general and an individual level. Have participants share experiences where they or others with disabilities have encountered barriers.
- Action - (30 mins.)** Divide the group into smaller groups (e.g., five people/group) and, using the "Barriers Scenarios" tool in the CRP manual, give each group a scenario and have them identify potential barriers and solutions to enable satisfactory recreation participation. Then have each group briefly share their ideas with the larger group.
- Action - (5 mins.)** Have participants identify and record potential barriers they might encounter in pursuing one or more of the activities which they identified (in participant guide). Ask each participant do a similar analysis for each of the remaining activities when they return home/before the next session.

Unit 10 "Resources - Personal"

- Objective 1** Participants will be able to assess personal resources relating to leisure.
- Action - (10 mins.)** Discuss the types of resources that are necessary for recreation participation e.g., finances, transportation, communication, and equipment, etc. Provide an example of an activity (e.g., bowling) and ask the group to list the resources needed to pursue this activity (refer to the "Personal Resources" section of the "Recreation Activity Resources" sheet in the participant guide to complete this group activity).
- Action - (10 mins.)** Have each participant do an analysis of personal resources required to participate in one or more of their chosen activities at the level listed in their recreation goals. Using the "Personal Resources" section of the "Recreation Activity Resources" form in the participant guide, list resources required and those at each one's disposal; any discrepancy is a barrier and to be overcome or coped with.

- Action -** Ask each participant do a similar analysis for each of the remaining activities when they return home/before the next session. Suggest that they include family/friends in this process if possible, as personal resource shortages may be overcome with 'people' resource surpluses. Mention that this should be an ongoing process that works best when there is more support for doing it.

= 70 minutes

Provide a 10 minute refreshment and washroom break

Unit 11 "Resources - Community" (first two objectives only)

- Objective 1** Participants will be able to describe sources of information about recreation opportunities in the community.

Action - (5 mins.) Have participants brainstorm a list of potential information sources from which to learn about local recreation opportunities - prepare a set of questions to guide the brainstorming process e.g., "How can I find out what entertainment events are going on in the local area in the next 6 days?", and "how would I go about finding out which fitness facilities in my area are wheelchair accessible?"

Action - (10 mins.) Gather a variety of information sources, e.g., brochures, yellow pages, leisure guides, newspapers, etc. and explain how these and other sources can be obtained and used e.g., leisure guide - different ones for various city areas, recreation integration specialists, waived fees if low income, etc.

- Objective 2** Participants will be able to name at least two agencies, facilities, or organizations that provide appropriate recreation services for activities of interest.

Action - (5 mins.) For a specific activity (e.g., computer training), demonstrate how to search for information about agencies, facilities, and organizations that offer that activity and/or opportunities for skill development in that activity. Do not exclude organizations that do not offer opportunities specifically for persons with disabilities.

Action - (20 mins.) Group participants into 'threes' and have them search for and identify two agencies, facilities, or organizations that offer one of the recreation activities chosen from each participant's list of 6 activities (a total of 6 resources should be identified per group - 2 per participant activity). Have participants record the names of these community resources on the back their respective "Recreation Activity Resources" form (in participant guide).

Action - Ask participants to do a similar resource search and identification for each of their remaining activities when they return home/before the next session.

= 120 minutes

Resume Individual Sessions:

****Individual sessions will continue for each participant according to the unit he/she was working on immediately prior to Group Session #2.**

Review of Units 6, 10, and 11

Objective 1 Participants will review and/or complete Units 6, 10, and 11 as presented during Group Session #2

Action - Participants will discuss and review written exercises pertaining to Units 6, 10, and 11 with the researcher. Incomplete exercises will be completed as needed.

Unit 9 "Resources - People"

Objective 1 Participants will be able to assess the availability of support from people such as family and friends.

Action - Discuss the importance of help and support from family and friends re: overcoming barriers and discuss the types of support they may need to participate in leisure activities (e.g., emotional, physical), providing examples for different situations. Also discuss attitudinal barriers potentially faced when asking others for help, including personal attitudes and that of others.

Action - Have the participant think about people they most often turn to for help and then identify i) the kinds of support received ii) the kinds of support expected in future iii) any problems getting this support from each of these people iv) any possible relationship changes due to their disability.

Action - Have the participant complete the "People Resource List", and encourage thought about potential new sources of help. Explore whether the participant is assertive in gaining the assistance needed for leisure participation, and also the comfort level of receiving assistance from others.

Objective 2 Participants will be able to make assertive requests for assistance.

Action - For participants who are unable to, or think they are unable to be assertive in gaining assistance, discuss the meaning and importance of assertiveness, as outlined in the participant guide e.g., "Being Assertive", written resource list, and practice exercise. Determine whether the

participant is interested in a formalized assertiveness training program and if so, refer to an appropriate program.

Unit 7 "Making Recreation Plans"

- Objective 1** Participants will be able to develop short and long term goals for participation in identified recreation interests.
- Action -** Briefly discuss the reasons for goal setting (defining direction, measuring progress, indicating need for changes) and how setting leisure-related goals is relevant to well-being achieved through leisure (i.e., to enjoy benefits available via leisure participation, must set goals to facilitate participation).
- Action -** Have the participant separate personal recreation interests into i) activities not requiring modification or adaptation ii) activities requiring some modification or adaptation iii) activities that person either will not or cannot participate in with modification or adaptation.
- Action -** Provide an example of a short term and long term goal for a specific activity. Have participants set personal short and long-term goals for i) and ii) above, using the "Recreation Activity Planning Sheet" in participant guide. Inform participants that current goals may be rethought and revised in future, and that this process continues throughout rest of program, and leisure life.

Unit XI "Resources - Community" (last objective only)

- Objective 3** Participants will be able to demonstrate the ability to locate and use one or more of the recreation resources in the community.
- Action -** Request participants to contact the agency, etc. which they identified for specific activities of interest, and to arrange a visit in order to assess the facility access, to participate in the activity or to learn the skills associated with that activity. If possible, facilitate participants with compatible needs and interests to plan to participate in the same experience. (Role playing and reading phone scripts are useful techniques to enable participants who lack confidence or knowledge about what to ask, to practice requesting specific information by phone).
- Action -** Participants will participate in activities as planned in action step above, with or without my accompaniment.
- Action -** Follow-up with participants to discuss the participation experiences in the community, and to offer support, as needed.

Unit 8 "What Else is There/Looking for Something Else?"

- Objective 1** Participants will be able to determine other potential recreation activities and interests that encompass the same recreation activities and interests as those listed in Unit I.
- Action -** Participants who can't or won't participate in some or all of the activities (identified in Unit I) that require adaptations can, at this point, brainstorm alternative recreation interests that might provide the same kinds of satisfaction (same reasons). Use the "Recreation Activity List" as a stimulus to brainstorm and record alternative activities on the "Recreation Alternatives Worksheet". Provide an example of how one activity might be substituted by another activity, based on similar reasons/motivations for doing them.
- Objective 2** Participants will be able to choose alternative activities and interests, analyse them, and determine what new skills must be learned, and what adaptations and modifications will be necessary.
- Action -** Have participants choose which of the alternative recreation activities they might be interested in learning more about and/or in pursuing.
- Action -** Have participants do an activity analysis on one of the activities chosen.
- Action -** From the analysis, have participants identify what new skills will need to be learned in order to participate in that activity. Mention that learning and practising new recreation skills are essential for maximizing the benefits and satisfaction received from that activity and that this should be considered in planning for recreation.
- Action -** Have participants determine the need for activity adaptations/modifications and mention that this is a process they will could go through with every new recreation activity they might like to pursue.
- Unit 12** "Before You're Through With Us..."
- Objective 1** Participants will be able to re-evaluate and, if needed, revise recreation participation goals.
- Action -** Do a summary evaluation of the participant's recreation goals to determine if any need revision. Have participant articulate how he/she plans to continue recreation participation and determine the need for any follow-up services.

APPENDIX E

Social Validity Questionnaire

SOCIAL VALIDATION QUESTIONNAIRE

	Not Important	Sort of Important	Important	Very Important
1. When Ms. McIlraith first contacted you, she indicated that the leisure education program would focus on helping you participate in community recreation activities you enjoy. Is this important to you? Please explain.	1	2	3	4
2. During the first number of weeks, you spent time discussing what you do for fun and why you do it, how you do it and can you do it either with or without adaptations, and you may have visited different activities in the community to see whether you might wish to participate in any one of them, and to determine what things, if any, might prevent you from doing them, and how you could deal with such barriers. Was this important to you? Please explain.	1	2	3	4
3. During this program, you made a decision about what recreation activity or activities you wanted to participate in, you made plans to participate in this activity and you carried out these plans. Was this important to you? Please explain.	1	2	3	4
4. Having completed this process over the past several months, describe for me what has happened to you as a result of this process. How would you rate the importance of this process?	1	2	3	4
5. Would you recommend this process to friends and other family members? Yes or no.				
6. Was it important that someone with a spinal cord injury delivered the lesiure education program? Yes or No. Please explain.				

APPENDIX F**Telephone Protocol
For Social Validity Questionnaire**

**TELEPHONE PROTOCOL
FOR SOCIAL VALIDITY QUESTIONNAIRE**

"Hello, I am _____ (name of person - must not be the researcher) and I am calling to ask you some questions about the leisure education program that you recently completed with Ms. McIlraith. There are questions so this should not take much of your time. Your name will remain confidential so that Ms. McIlraith will not know 'who said what'. It is important for these questions to be answered truthfully in case future programs need to be modified to better meet the needs of others with spinal cord injury. Do you have time to answer this questionnaire now?"

If person answers "yes", inform the person that you will be recording written notes, then refer to the social validation questionnaire and ask the participant to respond to each question. Thank the person for his or her time and cooperation, and say good-bye.

If person answers "no", set a mutually convenient time to phone back and complete the questionnaire.

APPENDIX G
Participant Profile

PARTICIPANT PROFILE

Name: _____

Gender: Male Female

Race/Ethnicity:

Asian African-American Hispanic Native American

Euro-American Other (specify): _____

Date of Birth: _____

Date of SCI onset: _____

(Age at SCI onset: _____)

(Time since injury: _____ years)

Level of Injury: Paraplegic

Quadriplegic

Severity of Injury: Complete

Incomplete

Pain: No Problem Small Problem Moderate Problem Major Problem

Mood-altering Medications:

Cause of Injury:

Vehicle-related Medical Sports-related Industrial

Violence/Suicide attempt Farm Other (specify) _____

Present Rehabilitation Services:

Physiotherapy Occupational Therapy Counselling (specify) _____

Other (specify) _____

Present Living Arrangement:

Alone With Friends With Parents With Spouse Other_____

Marital Status:

Single
(Never Married)

Co-habiting
(but single)

Married

Widowed

Separated

Divorced

Education:

Grade____

Secondary

Post-secondary

Undergraduate Graduate

Employment:

Student

Employed

Unemployed

Retired

Other_____

Annual Income:

Less than 10,000

30,001 - 40,000

10,001 - 15,000

40,001 - 50,000

20,001 - 30,000

More than 50,000

APPENDIX H

Pre- and Post-test Battery Protocol

PRE-TEST BATTERY PROTOCOL

Meet and greet the participant at CPA office. While leading the participant to the Board room, where the pre-test battery will be completed, engage in small chat and offer the participant a cup of coffee or water in order to facilitate comfort in the environment. Two pre-test battery forms will be placed on the table facing down in front of me, and pencils will be available on the table. Once the participant is seated comfortably at the table, proceed.

"As you know, I am conducting this research study. As part of the study, I am collecting responses about how people feel about themselves, about life, and about leisure. These responses will be collected from all study participants. Also, these responses will be collected both before the leisure education program is delivered and after the program is completed. Today you will be completing five different questionnaires. To do this, you should need about one hour. Each questionnaire has its own set of instructions. I will read the instructions for each questionnaire before you start answering each questionnaire. Do you need any assistance with recording your responses?"

Since some participants may be physically unable to write due to the nature SCI, assistance may be required and will be provided as needed.

"Do you have any questions about anything I have just explained?"

If yes, answer accordingly and continue.

If no, continue.

"Okay. Let's begin."

Flip both pre-test battery forms over. Give one copy to the participant and keep one for my reference. Commence by reading the instructions out loud for the first questionnaire. The questionnaires will be arranged in the following order: Life Satisfaction Index A (Neugarten et al., 1961; Adams, 1969); Perceived Control Scale (Decker & Schulz, 1985; Schulz & Decker, 1985); Center for Epidemiologic Studies - Depression Mood Scale (CES-D) (Radloff, 1977); Perceived Leisure Control Scale - Version C (Witt & Ellis, 1987), and; Leisure Satisfaction Scale - Short Form (Beard & Ragheb, 1980). Once the participant has completed the first questionnaire, with or without physical assistance in recording responses, read the instructions out loud for the second questionnaire. Continue in this manner until all five questionnaires are completed by the participant.

Using the "Participant Profile" form as a guide, ask the participant to provide me with demographic data that was not available in the CPA file.

"Just before you leave, I would like to ask you a few questions about your background. This information is needed for the research study that you are participating in."

Complete this form accordingly. Thank the participant for his or her time and inform him or her that I will be contacting all participants by telephone to let them know which group they have been assigned to. Lead the participant out of the CPA Board room and office area. Say good-bye.

POST-TEST BATTERY PROTOCOL

Meet and greet the participant at CPA office. While leading the participant to the Board room, where the post-test battery will be completed, engage in small chat and offer the participant a cup of coffee or water in order to facilitate comfort in the environment. Two post-test battery forms will be placed on the table facing down in front of me, and pencils will be available on the table. A tape recorder will be placed to the side and on top of the table. Once the participant is seated comfortably at the table, proceed.

"Thank you for coming today. As you know, the leisure education program has been completed, which means that all participants in the study will complete a second set of questionnaires. The procedure for answering the questions today will be similar to what was done at the beginning of the study. You will be answering questions that relate to how you feel about yourself, about life, and about leisure. You will be completing five different questionnaires. To do this, you should need about one hour. Each questionnaire has its own set of instructions. I will read the instructions for each questionnaire before you start answering each questionnaire. Do you need any assistance with recording your responses?"

Since some participants may be physically unable to write due to the nature SCI, assistance may be required and will be provided as needed.

"Do you have any questions about anything I have just explained?"

If yes, answer accordingly and continue.

If no, continue.

"Okay. Let's begin."

Flip both post-test battery forms over. Give one copy to the participant and keep one for my reference. Commence by reading the instructions out loud for the first questionnaire. The questionnaires will be arranged in the same order as that of the pre-test battery. Once the participant has completed the first questionnaire, with or without physical assistance in recording responses, read the instructions out loud for the second questionnaire. Continue in this manner until all five questionnaires are completed by the participant.

"Now that you've completed the formal part of the study, I would like to give you an opportunity to offer your opinion about adjusting to disability. I would like to do this because I realize that sometimes it is not possible to capture all that a person feels and

experiences in a questionnaire. If you agree to share your thoughts, I would like to record your comments using this tape recorder (point to it) so that I don't have to take notes. Some of your comments may be included, in whole or in part, for my research results. Your name, however, will remain confidential to me and your comments will be erased from the tape after I transcribe them into writing. Is it okay for me to tape record your comments?"

If no, ask if I can take notes instead. If no to this, then omit this form of data collection for that particular participant. Continue...

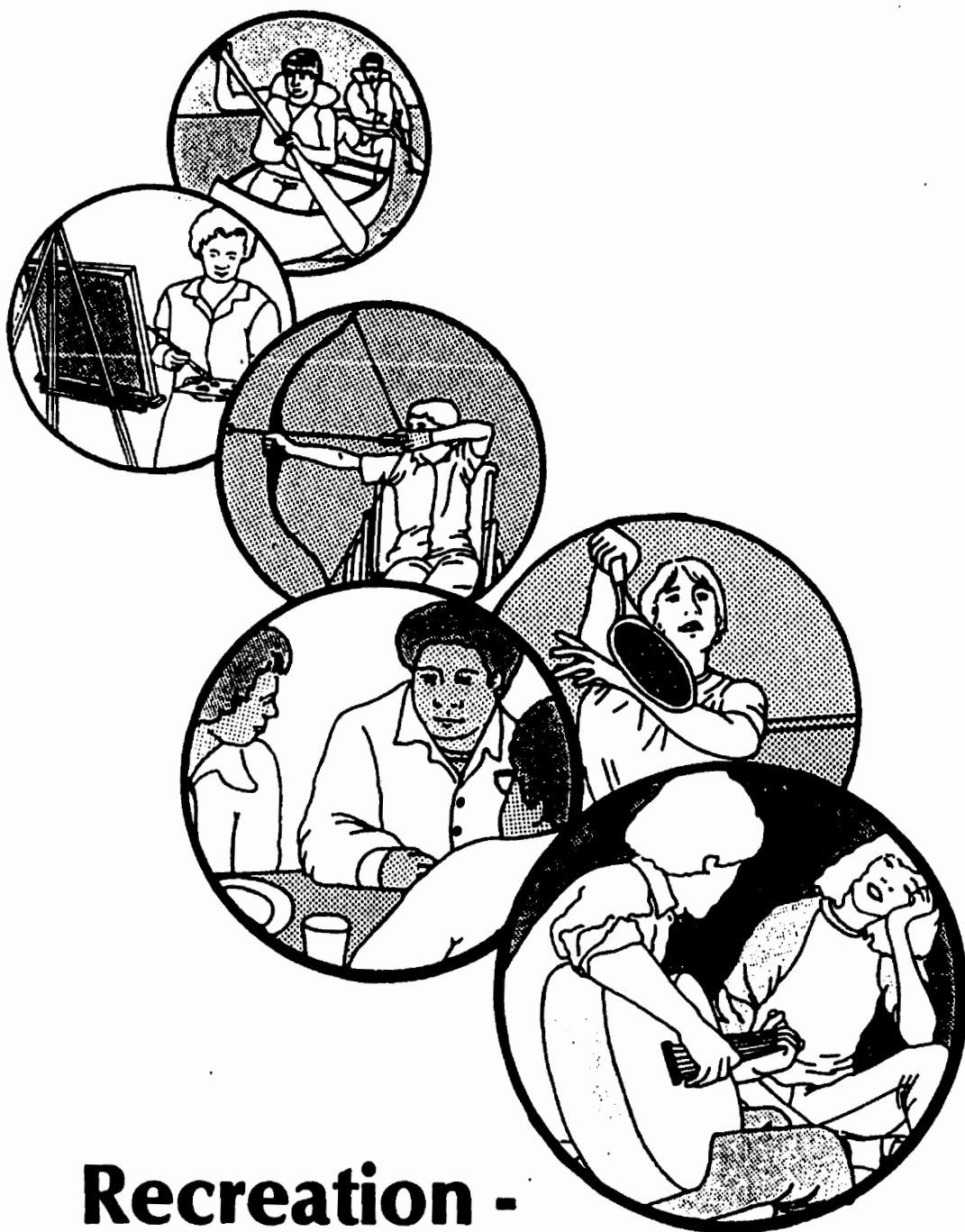
If yes, turn the tape recorder on and continue...

"Tell me, in your own words, about important factors that you think have either been a help or a hindrance to you in learning to live with a disability."

Allow person to answer.

Turn the tape recorder off. Thank the participant for his/her effort, commitment, and time in participating in this study. Remind experimental group participants that they will be contacted by telephone within the following couple of days by someone other than the researcher in order to complete the social validation questionnaire. Offer participants who were assigned to the control group the opportunity to participate in the leisure education program. Inform these participants that I will be contacting them to coordinate a schedule for program delivery. Lead the participant out of the CPA Board room and office area. Say good-bye.

APPENDIX I
CRP Participant Guide



Recreation - The Time of Your Life

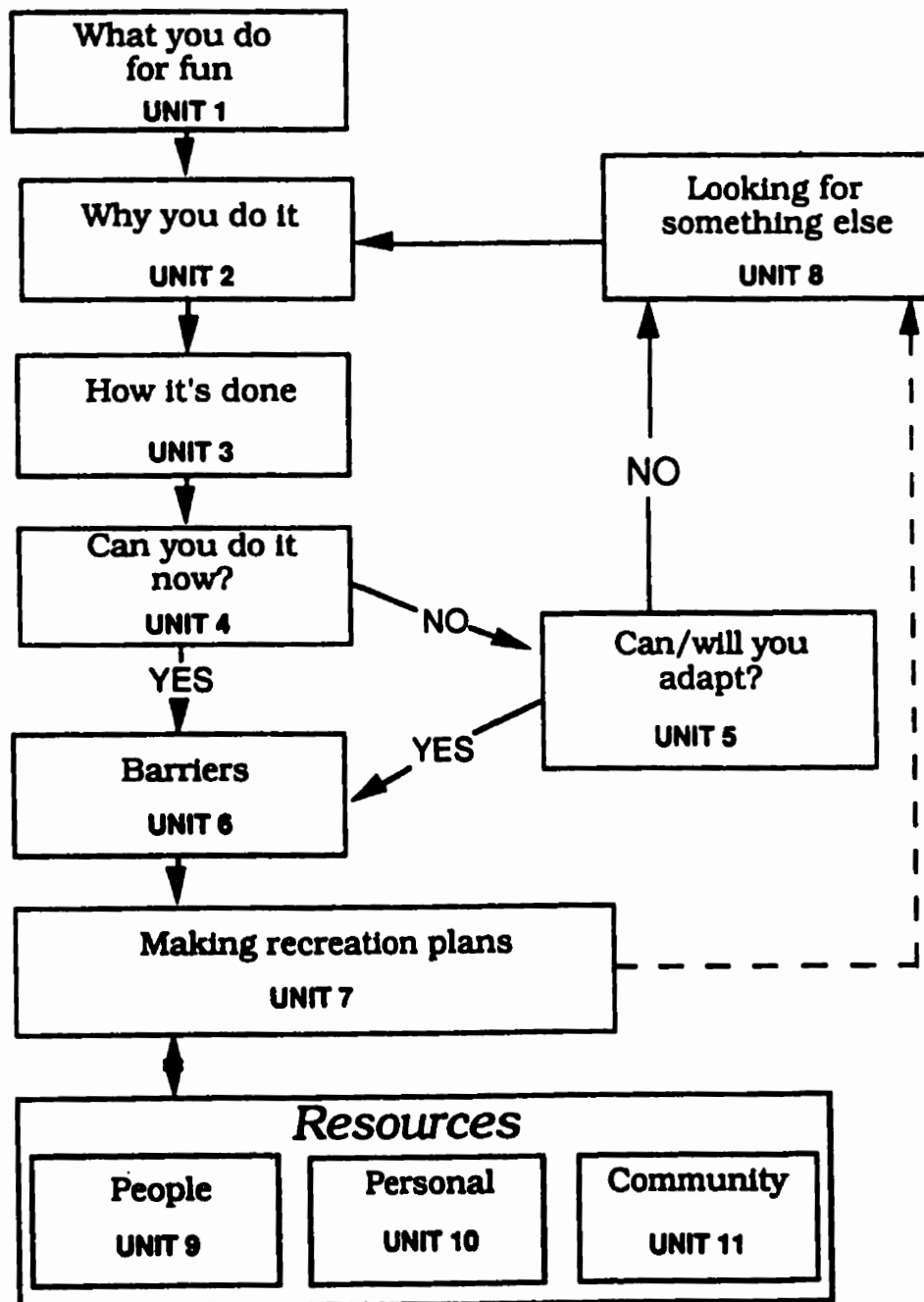
Name: _____

Recreation Therapist: _____

Phone #: _____

The Community Reintegration Program

Leisure Education Program Model





Introduction

"Why so much talk about 'recreation'? I'm not worried about recreation. I'm worried about getting better, about getting out of the hospital, about getting home, about getting back to work! I don't have time for 'recreation'!!!"

Well, that's the point. You *do* have time for recreation, and you should. Recreation is fun. You've enjoyed it in the past, so why should you stop now? And besides, recreation helps to improve health in lots of different ways. Recreation can improve our bodies, our minds, our spirits.

"Leisure education" is a way to get people to look at their feelings about recreation and to help them learn new recreation skills and improve old ones. This leisure education program was put together to help you find recreation activities that you can and will enjoy now. We hope it will also help you to find ways to participate in those activities in your home community, regardless of any disability you may have. We believe that this program can be of real value to you as you move toward improving the well-being of *your* body, *your* mind, and *your* spirit.

The program is designed to help you find information and come up with ideas which will lead you to satisfying recreation activity. Your recreation therapist will be going through the program with you.

This manual is a part of that program. It has 12 units. Each unit has been written to help you look at your own ideas about recreation activity and at your own past and future participation in recreation activity. To help you do this we have included some "forms" for you to work with. One of these forms will help you look closely at your individual recreation interests. Another can help you find new recreation interests. Others will assist you in thinking of and solving problems, and in finding people, things, and organizations that can help you. One form will help you make plans for the future. Each of these "forms" includes a description of its purpose and how it can be used.

It's not very likely that everyone who wants to take part in this program will have a recreation therapist who is always ready and able to go through it with them. We have therefore tried to give you enough information in this manual for you to achieve the goals of the program on your own, or with help from family, friends, and other resources in your community.

Our overall goal is really quite simple. We want you to be able to take part in the recreation activities of your choice, either new ones or old ones. Why? *Because you have a right to have fun. You have a right to feel good.*

You have a right to be as physically, emotionally, and mentally healthy as you can be, and recreation can help.

To help you make your own recreation choices, and then DO them, we hope to be able to show you, or remind you, how to:

- find your personal recreation interests and the reasons you have those interests.
- deal with things that get in the way of your recreation participation.
- figure out the resources you will need, and the resources you already have, to help you participate in the activities of your choice.
- come up with reasonable short and long term goals for your recreation participation.
- learn new skills and knowledge that will help you to achieve those goals.

We hope these are things you're interested in finding out about. For us to be successful, you have to believe strongly in your right to full and satisfying recreation. You have to believe that you can learn and do things to make that happen. We believe that this program will help you to find out what those things are and how to do them.





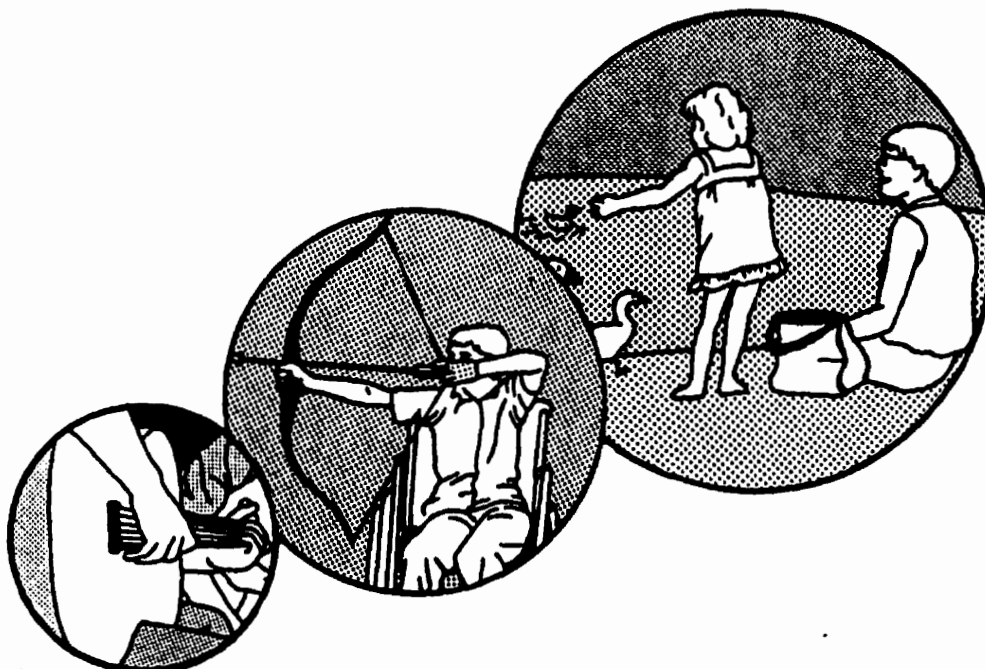
What you do for recreation...

To get a good idea of what you mean when you say "recreation", name those activities in which you have taken part in the past for fun, enjoyment or satisfaction. Or think of activities that interest you now for those reasons. Don't think of whether you believe you can or cannot actually do these things right now. We'll deal with that question later. We're just trying to find out what you like to do, based on your past experience or on your imagination.

Later, as you work through this program, you'll be deciding if you can take part in these activities right now. You'll also decide if you can or want to change them a little or use special equipment to take part in them. Finally you'll look at what other activities you can take part in that might give you the same kinds and amounts of satisfaction.

On the next page, there's a "form" called the "Recreation Activity List" to use for naming recreation activities that you're interested in. Instructions for using it are at the top of the page.

Remember, the point is to find out what you're interested in doing for recreation; what you've enjoyed in the past, what you think you'd enjoy now. We know it's hard to think about recreation activities without thinking at the same time about what you as a person can and can't do. But we want you to try, hard! What are your dreams about recreation? We'll deal with the other issues we mentioned above later in the program.





Why you do what you do...

We do almost everything for a reason, even recreation, maybe especially recreation. Sometimes we only talk about those reasons in general ways, like "It feels good", or "I just like it".

In this section of the manual, we're trying to figure out the exact reasons you participate in certain activities. Can you name or describe your reasons for taking part in the activities you've enjoyed before? Can you name the reasons you want to take part in activities you haven't tried yet? If you can, you may be able to find other activities you hadn't ever thought of doing that might give you the same kind of enjoyment and satisfaction.

On the next page, is another "tool", the "Recreation Reasons" list, with some instructions. You can use this for thinking about and writing down your own reasons for taking part in each recreation activity you've named.



Recreation Activity List

This list of recreation activities is provided to help you name the ways **you** spend **your** free time (or would like to spend it). This is a first step in your planning for future recreation activity. Our list is written here only to give you ideas. What you should be trying to name are those activities that **you** enjoy, whether or not they are included on this list.

Write the six activities you enjoy the most on the back of this sheet.

Acting
Archery
Art Appreciation
Auto Mechanics
Backgammon
Backpacking
Badminton
Baking/Cooking
Ballet
Ballroom Dancing
Basketball
Batik
Bicycling
Bird Watching
Boating
Boating/Sailing
Bowling
Canning
Canoeing
Card Games
Checkers
Chess
Church Activities
Copper Enameling
Crafts
Cribbage
Cross Country Skiing
Crossword Puzzles
Darts
Deck Tennis
Dominos
Downhill Skiing
Drawing/Painting
Euchre
Fishing
Flower Arranging
Flying/Gliding
Football
Frisbee
Gardening

Golf
Guitar Playing
"Ham" or "CB" Radio
Handball
Hearts
Hiking
Hockey
Horn Playing
Horse Shoes
Horseback Riding
House Plants
Hunting
Ice Fishing
Ice Skating
Isometrics
Jewelry Making
Jigsaw Puzzles
Jogging/Running
Judo/Self Defense
Knitting/Crochet
Lapidary (rocks)
Leather Crafts
Macrame
Meditation
Miniature Golf
Motorcycling
Music Listening
Orienteering
Paddleball/Racquetball
Party Going
Pets
Photography
Ping Pong
Playing Other Instruments
Poker
Politics
Pool/Billiards/Snooker
Pottery/Ceramics
Reading
Riflery

Roller Skating
Sailing
Sewing/Needlework
Shuffleboard
Singing
Skin/Scuba Diving
Sky Diving
Sledding
Snow Shoeing
Soccer
Social Dancing
"Socializing/Visiting
Softball/Baseball
Sports Officiating
Square Dancing
Squash
String Art
Sweepstakes/Lottery
Swimming
Table Games
Tennis
Tent Camping
Theater Going
Touring
Trailer Camping
Traveling
Video Games/Pin Ball
Volleyball
Volunteer Work
Walking
Watching Baseball
Watching Basketball
Watching Football
Watching Other Sports
Watching Television
Water Skiing
Woodworking
Writing
Yardwork/Landscape
Yoga

Recreation Activity List

1.

2.

3.

4.

5.

6.

Recreation Reasons

Below are a number of reasons that people have given when they were asked why they enjoyed recreation activities. We want you to use this list, if you need it, to name the reasons that **you** participate in the recreation activities that **you** enjoy.

For each number on this sheet, write in a recreation activity that you listed on your Recreation Activity List. Then, whatever your reasons are for taking part in each activity (whether or not they appear on this list), write them down next to that activity.

- | | |
|---|---|
| <ul style="list-style-type: none"> - to meet new people - to be with other people - for the competition - for the mental exercise - for the physical exercise - to increase my knowledge - to learn new things - to increase my skills - to learn new skills - for a change of pace - to increase my confidence - as a way to express my feelings - to share what I know with others - to practice old skills - for fun, pleasure, enjoyment - to relax, reduce stress - to stimulate my senses - to finish something | <ul style="list-style-type: none"> - to be outdoors - to share with family/friends - to be alone, to be on my own - just for the experience - to explore new things - to improve myself - for the time to think - to motivate myself - to forget about things for awhile - to face my fears - to be creative - to help others - to be open - to accomplish something - to keep busy - to show off a little - to make things I can see and touch - for the challenge |
|---|---|

Activity

Reason(s)

1. _____

2. _____

Activity**Reason(s)**

3. _____

4. _____

5. _____

6. _____



How it's done...

Now, we want you to try to look again at the recreation activities you've taken part in before, or are interested in now, to figure out what kinds of skills and abilities are required for **anybody** to participate in them. It's important that you not think of just yourself when you list the requirements of an activity. Instead think of the requirements for **anyone** who wants to participate.

We're doing this so that you can figure out a little later how **your** skills and abilities compare to the requirements for a given activity. Figuring out what's needed, then measuring it against what **you** can do, may show that you can participate right away if you want to. It may also point out skills and abilities that you don't have but that you could make up for by changing the equipment used in the activity or by changing the activity itself.

On the next page, you'll find an "Activity Requirements Form". It's for helping you to look at an activity and to figure out what skills and abilities are needed for anyone to take part.

This form contains space for you to write the name of the activity, its purpose (what the point of it seems to be), equipment used in it, and rules (if any). Next are some large spaces for you to list the different kinds of skills and abilities that are necessary for this particular activity. You can write these any way you want; as a description of what actually takes place in the activity, or just the actual abilities and skills that are required for participation. Just try to break down the activity as best you can.

Try to do this with all of the activities you identified as your recreation interests. There are extra forms at the end of this manual in the Appendix. If you need more, your recreation therapist has extras you can use, or you can make your own copies.

On the back of the form are two columns called "Problems" and "Changes". Don't do anything with these columns right now. We'll deal with them in Units 4 and 5.

The more you think through each specific activity, the more valuable it will be to you when you make decisions about whether or not to include that activity in your recreation plans for the future.

Activity Requirements Form

Activity name: _____

Purpose: _____

Equipment: _____

Rules: _____

PHYSICAL REQUIREMENTS: (for example "throwing a baseball", "endurance",
"running", "average strength" "sight")

MENTAL REQUIREMENTS: (for example "concentration", "understanding directions",
"attention to detail", "good memory")

SOCIAL REQUIREMENTS: (for example "patience with others", "acceptance of criticism",
"teamwork", "leadership skills")

Unit 4

Unit 5

Problem

[illegible]

Changes

[illegible]



Can you do it ?...

Now step back, take a good long look at yourself and describe yourself in terms of what you can do right now, physically and mentally. Come up with as complete a picture as you can. As you do this, keep in mind that it's important to describe your strengths, rather than your weaknesses. Think of what you **can** do, not just what you can't.

Also, try to think of what you'll be able to do in the future: in a month, two months, six months, and a year. This will help you in future recreation planning.

We're asking you to do this because you have to figure out whether what you're able to do right now matches up with the requirements of the activities you named earlier. If your abilities and the requirements of the activity you named are pretty much the same, you should be able to start making plans for participation right away.

If, on the other hand, there is some difference between what you can do and what the activity requires, it's important for you to know exactly what that difference is and how big it is. This will be helpful when we try to find ways to make up for that difference.

Now look at the "Activity Requirements Forms" for the activities you have named as your interests. On the back of each form, in the left hand column, name those requirements of the activity (from the list of requirements on the front) that you are at this time not able to do or would have trouble doing. For now we can call these requirements "problems", but hopefully not for long. We'll look at what you can do about these problems, and fill in the right hand column in Unit 5.

If you can do all of the requirements of the activity right now, there's no good reason for you not to take part in that activity right now. For those activities which require things you can't do now, the next unit should help you out.



Ways to make it happen...

Many people are now taking part in recreation activities which once seemed impossible for them to enjoy because of their disabilities. And they're having a wonderful time! That's because they figured out how to change some of the ways people usually take part in those activities. They made these changes, which are often called adaptations, to make up for their lack of some of the abilities that are usually required by the activity.

Such changes often mean finding or making special recreation equipment that allows a person with a disability to do the same things people usually do, only in a different way. Some examples include a bowling ball with a handle that disappears into the ball once it's thrown, a tennis racket or a garden hoe attached to an artificial arm, a brace for holding a paintbrush in the mouth.

Sometimes such changes mean adjusting the activity itself in some way, like a small change in the rules, or in the size of the playing field. Some examples are allowing two bounces instead of one in tennis, lowering the basket in basketball, six outs instead of three per inning in baseball.

The time and effort you spend to learn about adaptations that have already been thought of, or to think of some yourself, can lead to much better and more enjoyable participation in the activities you choose.

Look again at the "Activity Requirements Forms" you did for each of the recreation activities you participate in or want to participate in. On the back of the form, in the left column, you should have a list of the activity requirements that you think you'll have a problem with. Next to each of these, in the right column, list one or two changes which could be made that would allow you to overcome the problem and take part. Try to do this for each of the activities you named, and for any others you may choose.

Sometimes you may not be able to think of anything right away, but give it your best shot. Don't give up until you've thought of something. And don't stop thinking after you've listed the adaptations you've already seen or know about. What you should be looking for is the ideal change or changes that would let you to take part but still keep the activity fun and interesting.

When you think about changes or adaptations, keep thinking the less the better. What we mean is that the less you need to change a game or activity in order to take part, the more likely that activity will provide you with the benefits you chose it for in the first place.

Once you have a pretty good idea of the kinds of changes you need and are willing to make to get involved in a recreation activity, you should try to

figure out how to make that change happen. Sometimes this means getting a hold of some special equipment. There are two ways to do this. Get it from someone else or make it yourself.

Work with your recreation therapist to find out where or how to get the kinds of equipment you need from places in your local area. You can also ask her/him where you can get a list of companies that make and sell such equipment.

Another option is to **make** the equipment you need for taking part in an activity (or have it made for you). Try to think of ways you could fix equipment that is already used in the activity, using common tools and materials.





Barriers...

No matter how smart you are, or how careful you are, sooner or later you're going to run into some people or things or conditions that can get in the way of your enjoyment of recreation activities. This doesn't happen only to persons with disabilities, but it's safe to say it happens to them more often than to persons without disabilities. We refer to these people, things, or conditions as "barriers" and you should think of them as challenges to be overcome. We'll deal with ways to do this in the next section and later sections which describe resources you can use to solve barrier problems.

Barriers are usually divided into three categories.

1) Physical barriers:

A physical barrier in recreation is some thing, often man-made, that keeps people from using recreation buildings, parks, facilities or other areas. Physical barriers include stairs, curbs, narrow hallways, doors that are hard to open, elevators without braille buttons or tones. There are also natural physical barriers however, that can cause just as much trouble. Steep hills, thick tree growth, rocky soil or gravel, and other natural conditions can cause problems for many persons who, for instance, use wheelchairs.

2) Attitude barriers:

This kind of barrier exists when someone has mistaken ideas about people with disabilities; who they are, what they are like, and what they can or cannot do. These ideas then affect the way they look at and treat all people with disabilities. Usually this kind of thinking winds up making it more difficult for people with disabilities to take part in recreation activities of their choice.

Many people who are not disabled believe that persons with disabilities should be separated from other people, especially when it comes to recreation. "It's better if they hang out with their own kind". Such an attitude is often an excuse to keep from getting too close to disabled people, an excuse caused by fear, discomfort, or by not wanting to change an activity so that persons with disabilities can take part. This attitude discourages people with disabilities from taking part in programs with non-disabled persons. Most people, whether or not they're disabled, know when they're not wanted.

Some people with disabilities sit at home and don't get involved in things they enjoy because they're afraid they won't do well, that they'll look funny, or that they'll make other people taking part angry. They choose to be alone to avoid the stares of others.

These are attitude barriers.

3) Resource barriers:

These barriers result from not having the resources needed to take part in recreation activities. No money, no transportation, no equipment, no moral support are all resource barriers. For example, if a person with a disability wants to swim for fun and exercise, but there is no swimming pool

nearby, and no way to get to the nearest pool, that person faces a resource barrier.

It's important that you have a good understanding of what is meant by the word "barriers". If you don't, barriers will be that much harder to see and overcome when you run into them. Be sure your family and friends understand about barriers too. Sometimes it's hard for people who don't run into barriers every day to know what they are and how they get in the way of doing things. But your family and friends can give important support in helping you deal with some kinds of barriers.

On the following page is a list of books, catalogs and articles that can help you as you try to overcome barriers to your recreation.

Another way of finding resources is to use your own imagination. Find out what local agencies, organizations, or individuals there are that might be able to help you or at least provide some advice. You might even get someone at some local agency to begin thinking about putting together a formal program on "barriers".

Of course, most of the time you're going to have to figure out the answers to barrier problems yourself. That means you'll have to count on your own mind as your number one resource. We've included a short article called "A Problem Solving Method" to help. You may be able to use this information when you find yourself up against some problems caused by barriers, and have to come up with ways to deal with them.

Barriers Resource List

If you want to find out more about barriers and how to remove them, there are a number of books and articles listed below that may be helpful. You can also check with local advocacy groups, consumer groups, planning boards and commissions, or local agencies responsible for determining and enforcing building codes.

1. **Bowe, Frank, HANDICAPPING AMERICA: BARRIERS TO DISABLED PEOPLE.** New York: Harper & Row, 1978.
2. **Bowe, Frank, REHABILITATING AMERICA: TOWARD INDEPENDENCE FOR DISABLED AND ELDERLY PEOPLE.** New York: Harper & Row, 1980.
3. **"About Barriers," "Selected Resources for Accessibility," "The Architectural Barriers Act and You," and RESOURCE GUIDE TO LITERATURE ON BARRIER-FREE ENVIRONMENTS 1977.** Architectural and Transportation Barriers Compliance Board, Washington, D.C. 20201
4. **ACCESS FOR ALL: A WORKBOOK FOR OUTDOOR ACCESSIBILITY (1979),** by Rita Plourde. Minnesota Department of Natural Resources, Division of Parks and Recreation, St. Paul, MN.
5. **ACCESS NATIONAL PARKS,** Superintendent of Documents, Washington, D.C. 20402.
6. **BARRIER AWARENESS: ATTITUDES TOWARD PEOPLE WITH DISABILITIES (1981),** edited by Debra Cornelius. Regional Rehabilitation Research Institute on Attitudinal, Legal and Leisure Barriers, George Washington University, 1828 L Street, N.W., Washington, D.C. 20036. (Request publications list also).
7. **"Choosing an Accessibility Consultant," "Swimming Pools," "Recreation," "Environments for All Children," "Doors and Entrances,"** and other 4 to 6 page access information bulletins are available. Design Resources Coordinator, National Center for a Barrier Free Environment, 1140 Connecticut Ave., N.W., Suite 1006, Washington, D.C. 20036.
8. **DESIGN FOR ACCESSIBILITY: EQUIPMENT AND AIDS CATALOG 1980-1981,** by Miriam Frances King and Robert A. L. Williams. Michigan Center for a Barrier Free Environment, 6879 Heather Heath, West Bloomfield, MI 48033.
9. **DESIGNING FOR THE DISABLED** by Selwyn Goldsmith (RIBA Publications, Ltd., London). An important book for anyone concerned with the design of buildings to be used by disabled people.

10. **GUIDE TO DESIGNING ACCESSIBLE OUTDOOR RECREATION FACILITIES (1980).** Information Exchange, National Park Service, U.S. Department of the Interior, 440 G St., N.W., Washington, D.C. 20243 (free).
11. **AN ILLUSTRATED HANDBOOK OF THE HANDICAPPED SECTION OF THE NORTH CAROLINA STATE BUILDING CODE,** The North Carolina State Building Code Council and the North Carolina Department of Insurance, P.O. Box 26387, Raleigh, NC 27611.
12. **INCLUDING EVERYONE: A CONFERENCE PLANNER'S GUIDE TO INCLUDING PEOPLE WITH HANDICAPS (1979),** Center for Training and Development Multi-Resource Centers, Inc., 1900 Chicago Ave., Minneapolis, MN 55404.
13. **INTO THE MAINSTREAM (1975),** by Stephen A. Klimant. American Institute of Architects, 1735 New York Ave., N.W., Washington, D.C. 20006.
14. **MAINSTREAMING HANDICAPPED INDIVIDUALS: PARK AND RECREATION DESIGN STANDARDS MANUAL,** by Dr. Silas P. Singh. Program Development, Bureau of Land and Historic Sites, Illinois Department of Conservation, 405 East Washington St., Springfield, IL 62706.
15. **MAKING PHYSICAL EDUCATION AND RECREATION FACILITIES ACCESSIBLE TO ALL: PLANNING, DESIGNING, AND ADAPTING,** by AAHPERD Publications, P.O. Box 704, 44 Industrial Park Circle, Waldorf, MA 20601.
16. **MODIFICATIONS OF PARK AND RECREATION FACILITIES FOR HANDICAPPED INDIVIDUALS,** by Jay Jorgensen, Hawkins and Associates, Inc., 804 D St., N.E., Washington, D.C. 20002.
17. **PROTOTYPICAL PARK DESIGN: ACCESS FOR THE HANDICAPPED,** by Mark L. Baker, Stephen G. Gang, and Dr. Gerald S. O'Morrow. Institute of Community and Area Development, University of Georgia, Athens, GA.
18. **THE PLANNER'S GUIDE TO BARRIER FREE MEETINGS (1980),** Barrier Free Environments, Inc., P.O. Box 30634, Raleigh, NC 27622 and Harold Russell Associates, 235 Bear Hill Road, Waltham, MA 02154.

A Problem Solving Method

There is really nothing special about problem-solving. We do it every day. When we have choices to make, we have problems to solve. Sorry to say, we often do things without getting all of the facts. We jump to conclusions. We don't think clearly about what could happen to ourselves and to other people when we make certain choices. In other words, quite often we aren't careful enough when we solve problems, and the solutions we come up with don't work.

Problem solving can be done in a way that guarantees a careful approach. The problem solving method we'll talk about here is such a way.

There are five steps. First, get a good, clear idea of what the problem really is. Second, figure out where you really want to get to, what you really want to happen. That is your goal. Third, decide the best way or ways of making that happen. Fourth, do it. Fifth, figure out if you've reached the goal and, if not, what else needs to be done.

Step One: Finding the Real Problem

Careful thinking is needed here. Sometimes, the things that let us know there is a problem are not the actual problem itself. They may be things that were caused by the problem. For example, you may believe there is a problem because a co-worker is always angry with you. But this anger is almost surely a symptom of some other problem. He doesn't like the way you do your work, he has problems at his own home, he misunderstood something you said.

In figuring out a problem, you must first ask : What are the facts? How did the problem come about? Who sees the situation as a problem?

Often, this last point is very important. Some things may be looked at as a problem by you but not by anyone else. Someone else may see a problem in something that doesn't bother you at all.

Step Two: Figuring Out Your Goal

What exactly do you want to have happen as a result of solving the problem you've named? Where will everything end up if the problem is solved to your satisfaction? In the example of the angry co-worker, you might want to make friends with him. Or you might just want him to leave you alone from now on. Answering these questions about what you want will help you clearly define your goal. You may even find that the problem isn't really in the way of arriving at your goal.

Clearly knowing your goal can also give you important information about the size of the problem. It should tell you the distance between where you want things to be and where they are right now. Knowing your goal, and knowing how far you have to get to reach it, can help you figure out how to get where you want to go.

Step Three: Finding and Choosing the Best Ways to Reach Your Goal (or Close to It)

The solution to many problems can be figured out by looking at them in terms of "forces". First, figure out the things that seem to help make the problem bigger. Those are negative forces. Then figure out the things that seem to be keeping the problem from getting worse. Those are positive forces. The negative forces will probably work against solving the problem.

The positive forces will probably be helpful in finding a solution. The best idea, of course, is to get rid of the negative forces AND to strengthen the positive forces as much as possible.

"Forces" as we use that word here are very often people, who can either help or hurt the situation. But "forces" can be lots of other things too. The weather, time, attitudes, the economy, money, all of these things and lots of others might also be "forces" in some problem situations.

Breaking down a problem as completely as you can according to positive and negative forces will help you get a good look at it. The better you understand it, the more likely your solution will be a good one.

It will probably be helpful to list each of the forces you find in or behind a problem, both positive and negative. You may also want to write down how big these forces are and how important you think they are.

Next, you have to think of as many ways as you can for using the positive forces to solve the problem and for reducing the effect of the negative forces. Put these ways together into several possible plans of action.

For each plan of action, be sure you can name the forces that will support it, those that will work against it, and what the likely "cost" may be. "Cost" can be money, but it can also be other things, like making people mad, or like losing something (a job, a friend, whatever).

Next, compare each plan of action you have thought of, based on three things:

- 1) the balance of positive and negative forces. The more the positive, forces outnumber the negative forces, the more likely the action plan will end up as a solution.
- 2) the likely cost. You may not be able to afford some plans, or they may cost more than you're willing to pay to solve the problem.
- 3) the closeness of the likely results of the plan of action to your goal.

Choose a plan of action that will be the best balance of these three things.

Step Four: Going With the Plan of Action

As much as possible, the course of action you choose should take into consideration the ideas of those people who are going to be affected by it, as well as those who will be seeing it through. That's one very important reason that Step Three should not be done alone if you can help it.

In all problem-solving situations, the end result is change. We either change the situation and thereby do away with the problem, or we change people's ideas and feelings about the situation so that there is no longer a problem. Either way, all those who will be affected by the plan of action to solve a problem need to be told as much as possible about it. If they are not, another "negative" force can enter the picture.

Step Five: Did the Plan Work?

Did the course of action do away with the problem or make it better? Were there unexpected happenings that now need to be looked at? Did you miss some of the causes of the problem? Is more action necessary?

These are some of the questions you should ask once you have acted to solve a problem. What is often overlooked is that these are also good questions to be asking all through the problem-solving process. You should be checking your progress all along the way, especially with those people

who will be involved in your course of action or those who will be affected by it. These people will be less likely to become part of the problem if they feel actively involved as part of the solution.

Here are some common reasons why problem solving attempts don't work:

- don't identify the real problem that exists
- don't get all of the facts needed for finding the size of the problem and what can or cannot be done about it
- don't explain to the people who are supposed to be part of the solution what they're supposed to do and why.
- don't explain anything to the people who might be affected by the solution
- don't take enough time to test the different possible solutions or choose one too quickly
- don't anticipate things that can screw up the solution.

Problem solving should be much easier if you just think clearly and carefully about what the problem really is, what its parts are, and how you can deal with each one. Then, make good plans for solving the problem based on your understanding and judgement, and carry these plans out with confidence and courage.



Making plans for your future recreation ...

Now it's time to make some plans for those activities you've named as your recreation interests.

You make plans for almost every thing in your life. You have financial plans, work plans, family plans, insurance plans, all kinds of plans. For you to get the most out of your life, you need to make recreation plans too!

By now you have named some recreation activities that you're interested in. You should have a good idea of which ones you can take part in right now. You should also have a pretty good idea of which of those activities you **could** take part in with certain kinds of changes, and whether you're interested in making those changes.

Following this page, you'll find a "Recreation Activity Planning Sheet". You can use it to make some short and long term plans about one of those activities you plan to follow up on. Think carefully about each part of the plan. There are more "Recreation Activity Planning Sheets" at the back of this manual in the Appendix and you can ask your recreation therapist for more sheets if you need them.

On the back of the "Planning Sheet" is a section for writing down possible "barriers". Try to think, **in advance**, of any barriers you might run into as you go for this activity. That way you'll be prepared if and when they do come up.

When you fill out these sheets, there's no point in writing in ink. Use a pencil because you'll be changing your mind about recreation plans from time to time for many different reasons. It is helpful, however, to write down these plans, and see in what directions you're heading.

Try to include your family and friends in your planning. Then they can be fully aware of why you're moving in the directions you've chosen, where you hope to wind up, and how they can help you get there.

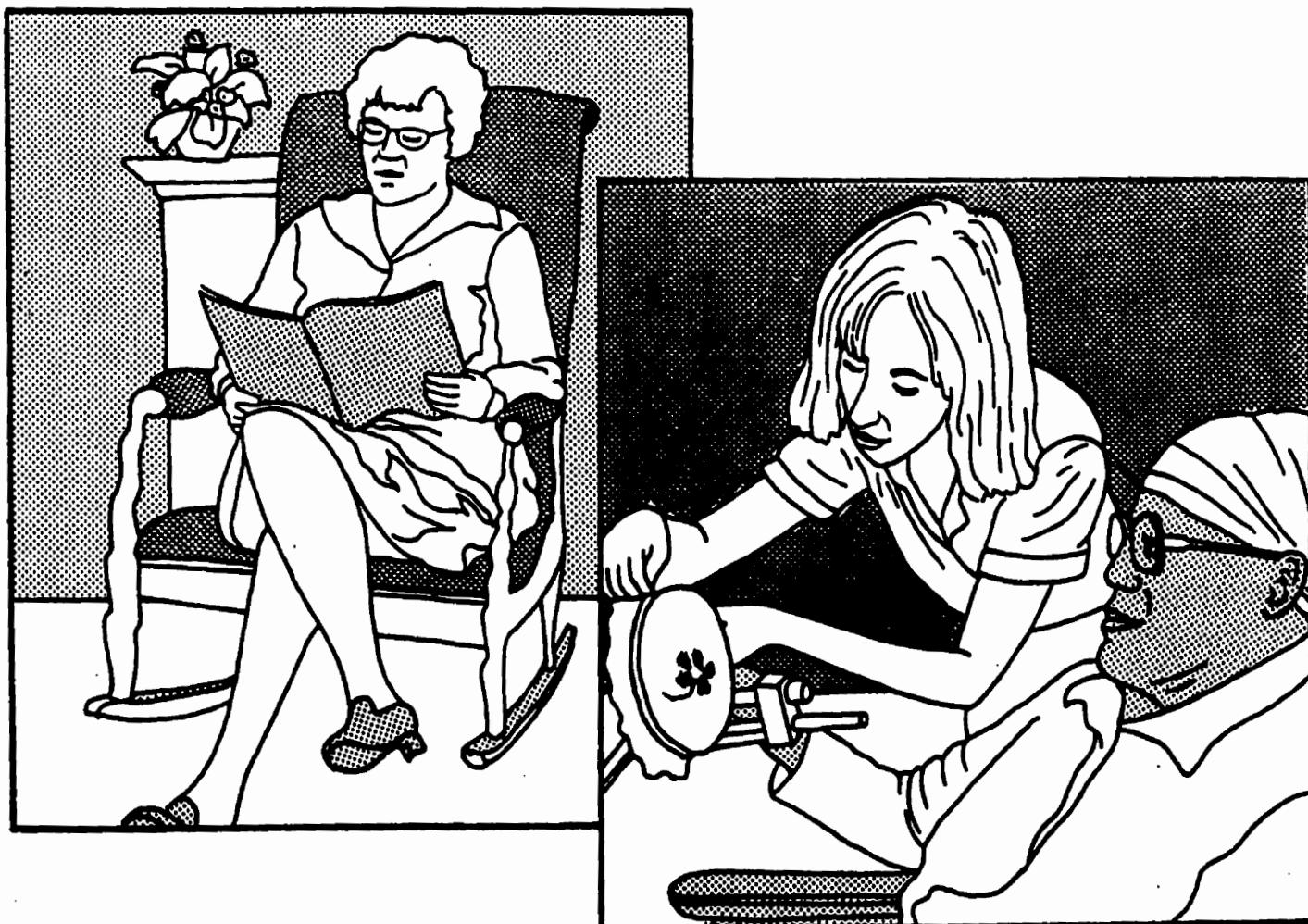
One more important point. Don't be discouraged if you find that the things you're interested in doing for recreation are not available to you because of your present condition. That's what Unit 8 is about. We want to show you how to find other **new** recreation activities that you may not have thought of before. We want to show you how to find activities that will give you the same kind of satisfaction and enjoyment as those you've already named.

So chin up, and full speed ahead!

Resources...

Figuring out changes, or "adaptations", you can make and dealing with barriers so that you can take part in recreation activities of your own choice can take a lot of time and effort. You have to want it and you have to be willing to work at it. But you do have quite a few things on your side. You just have to take the time to look for them and once you find them, use them as much as you can. The people, agencies, and things that you can use to get what you want and need to take part in enjoyable recreation activities are your "recreation resources".

The next few pages may help you to find some of these resources. Some of these resources will be useful to you for particular activities that you're trying to get involved in. Some of them will be useful time and again, for all kinds of activities. All of them can help you to create bridges, overpasses and detours around the barriers you run into as you follow your recreation dreams.





Resources...people

These are the individuals (family, friends, and others) we call your People Resources. It's important to figure out who these people are, what kinds of support and help they can give you, and how much. **Independence, doing things on your own as much as possible, is always a goal you should try for.** But being disabled, and dealing with barriers, means you're probably going to need some help sometime, somewhere, with something. That can be a hard thing to face, but you have to learn to do it.

Whom you can count on to provide that help is something you're going to want to know, and the more you've thought about it ahead of time, the easier it will be to find them when you really need their help.

Think about the kinds of help you might need in your future recreation participation. Think of the people you've depended on in the past, and how you've depended on them. Try to think about how your relationships with these persons may have changed since the last time you counted on them.

Once you've thought about all those things, build your new "people resource network". To get started you can use the "form" on the next page, the "People Resources List". This form gives space for writing the name of each person you think of, the kinds of support (financial, moral, transportation, physical, etc.) you believe you can expect from each one, the amount of support, and possible problems you may run into when you ask for support from each one.

Many people have some trouble asking other people for help, out of shyness, or not wanting to be a bother, or other reasons. If you're one of those people, we suggest that you work on your sticking up for yourself. Following the "People Resource List" is a short article called "Being Assertive" which might help. You can also read books on assertiveness or you may want a more formal program like an assertiveness training class. Often such classes are held by community colleges and universities, mental health centers, YMCA's, YWCA's, and recreation departments...at little or no cost.



Recreation Activity Planning Sheet

1. What I want to do:

2. When I want to do it, for how long, and how often:

3. Whom I need to contact or talk to before I go (about policies, personal assistance, regulations, access, etc.)

4. Where I need to go to do it:

5. Changes (or adaptations) I can or will have to make:

6. Other things I need to do, think about, or decide:

Possible problems (barriers) I might encounter:

Physical

Attitude

Resource



What else is there?...

What we're about to tell you can be useful in two cases. **Case #1:** You don't have the abilities to take part in some activity you want to take part in, even with adaptations. **Case #2:** You are simply looking for more recreation activities, other than the ones you've already named, that you can enjoy.

The process below can lead you to activities that will provide the same kinds of satisfaction that you used to get from something you can no longer do. It can also help you find more activities like the ones that you already enjoy.

"Recreation Reasons" are important parts of this process. Remember we told you how important they'd be when we talked about them earlier. Go back to "Recreation Reasons" on page 9 and look at the reasons you gave for taking part in each recreation activity you listed.

Look at one of the activities you decided you can not do right now. Try to think of several replacement activities that a person could take part in for the same reasons. Check the list of activities on the "Recreation Activity List" (p. 5) to get some ideas for replacement activities. Don't pay much attention right now to whether or not you would like to participate in the other activities you think of. Just try to list as many as you can. Use the "Recreation Alternatives Worksheet" on the next page to write down the different activities you think of.

Now, from the different activities you've named, decide which ones you might like to try. Don't think too much about whether you can take part in them right now. We're looking for things you would like to do.

Maybe you have already thought of another activity you would like to try for completely different reasons. That's cool. The important thing is to keep looking for new and different ways to make your recreation as full as it can be.

You already know what an "Activity Requirements Form" is. Do one for each of the new activities you want to try. From these forms you should be able to figure out what new skills you'll have to learn, as well as what adaptations or changes you may need to make to participate. If you're not sure about the requirements of any of the recreation activities you've thought of, ask someone about them. Your recreation therapist is one person you could ask. Or find a library with books on recreation activities.

This is the same thing you've already done for the activities you first named as your recreation interests. You might want to go over how that went by looking at earlier sections of this manual ("What you do for recreation",

"Why you do what you do", "How it's done", "Ways to make it happen").

The last step is to set some more goals for yourself, and fill out a "Recreation Activity Planning Sheet" for each new recreation activity you have in mind.



Recreation Alternatives Worksheet

This worksheet should help you name some new recreation activities which may give you the same kinds of enjoyment and satisfaction as activities you already take part in or want to take part in. Naming such activities can increase the number of ways that you can enjoy yourself, and may help you find rewarding substitutes for activities which have become hard for you.

In the first column list the recreation activities you named on your "Recreation Reasons" form in Unit 2. In the second column list the reasons you gave for taking part in each of those activities. In the third column, write the name of one or more activities you think might satisfy the same set of reasons.

<u>Activity</u>	<u>Reason(s)</u>	<u>Alternative Activity(ies)</u>
1. _____	_____	_____
	_____	_____
	_____	_____
	_____	_____
2. _____	_____	_____
	_____	_____
	_____	_____
	_____	_____
3. _____	_____	_____
	_____	_____
	_____	_____
	_____	_____

<u>Activity</u>	<u>Reason(s)</u>	<u>Alternative Activity(ies)</u>
4. _____	_____	_____
	_____	_____
	_____	_____
	_____	_____
	_____	_____
5. _____	_____	_____
	_____	_____
	_____	_____
	_____	_____
	_____	_____
6. _____	_____	_____
	_____	_____
	_____	_____
	_____	_____
	_____	_____

People Resource List

This form is provided to help you figure out what people you will be able to count on for help as you move through this program and as you begin to take part in the recreation activity of your home community.

We think you'll find it helpful to write this information down in the spaces provided on this form, especially for future reference. It's important that you think of all the people you believe you can look to for support. This includes family, friends, and other people like home health aides, neighbors, and people who provide various services in your community. Try to figure out what kinds and what amounts of support they will be able to give to you.

Be completely honest with yourself as you make out this list, and remember that some people's attitudes toward you may have changed over time. The people who show up on this list should be those you can rely on right here and now. You might even try checking with people to be sure you can count on them.

Name	Kind of Support (examples: -transportation -financial -companionship)	Level of Support (examples: -whenever I need it -for rec. classes only -on weekends only)	Possible Problems (examples: -work schedule -often out of town -lives 30 miles away)
=====	=====	=====	=====
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
F _____	_____	_____	_____
A _____	_____	_____	_____
M _____	_____	_____	_____
I _____	_____	_____	_____
L _____	_____	_____	_____
Y _____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

	Name =====	Kind of Support =====	Level of Support =====	Possible Problems =====
F R I E N D S	_____	_____	_____	_____
	_____	_____	_____	_____
	_____	_____	_____	_____
	_____	_____	_____	_____
	_____	_____	_____	_____
	_____	_____	_____	_____
	_____	_____	_____	_____
	_____	_____	_____	_____
	_____	_____	_____	_____
	_____	_____	_____	_____
O T H E R S	_____	_____	_____	_____
	_____	_____	_____	_____
	_____	_____	_____	_____
	_____	_____	_____	_____
	_____	_____	_____	_____
	_____	_____	_____	_____
	_____	_____	_____	_____
	_____	_____	_____	_____
	_____	_____	_____	_____
	_____	_____	_____	_____

Being Assertive

Being **"assertive"** means standing up for yourself. Being **"assertive"** means knowing and asking for **your** rights while you respect the rights of others. Being **"assertive"** means being open, honest, and direct about what you want and how you feel.

Being assertive isn't easy, especially if you're not used to it. The honesty and openness that go with being assertive can sometimes upset or hurt other people or make them mad. For this reason many people avoid being assertive. They say, "It's not very important anyway", or "It's not worth the confrontation". This type of behavior is **"non-assertive"**. When people are non-assertive, their rights tend to get overlooked or ignored, and they let it happen!

Being assertive means understanding that if you are open and honest, you should not have to take the responsibility for how other people feel about it. How they feel is up to them. You're responsible for **you** and how **you** feel. If you are asking for your own rights, and you are not ignoring the rights of other people, you shouldn't ever feel guilty, shy, or embarrassed.

Non-assertive people tend to hold things in rather than dealing with them openly. Sometimes when people continue to be non-assertive, they suddenly **"explode"**. They just can't hold in all the bad feelings that go with being ignored anymore. Such explosions are **"aggressive"**. Sure, an aggressive person stands up for himself, but in a way that overlooks or ignores the rights of others. He's not just being honest. He's often hostile and threatening.

You don't need to let things get that far out of hand. You have rights. If you understand and believe in these rights, being assertive is a lot easier.

You have the right to:

- be respected as a responsible person
- make reasonable requests
- refuse requests
- ask questions
- make up your own mind
- have your own feelings and opinions
- **BE YOURSELF**

Can you think of other rights you have? Try listing them in the space below.

Many things get in the way of being assertive. A few of these things are:

- guilt feelings
- fear of hurting other people
- fear of what others will think
- feeling that you don't have the right to be assertive

There may be some specific reasons why you don't feel you can be assertive. What are they?

If you'd like to work on being assertive try these exercises.

1. Describe two situations when you think you were assertive. How did you feel?
2. Describe two situations when you were non-assertive. How did you feel then?
3. What people do you have the most trouble being assertive with? In what kinds of situations do you have the most trouble? Try to figure out why. Then think of some ways you might be able to be more assertive in these situations and with these people. If it's possible, let the people know that you're trying to work on being more assertive. If they know that you want to be more assertive, they may be more understanding and even helpful.

Your assertiveness is one of the resources that will help you find and enjoy a full recreation life. It's never easy to change, and becoming assertive isn't something that will happen overnight. You may feel like you need help. If so, there are assertiveness training groups that you can join. Contact your local community college, recreation department, or mental health center. They should be able to help you find good, inexpensive training programs.

Another option is to buy self-help books. A few good ones are:
When I Say No, I Feel Guilty by Manual J. Smith
Woman, Assert Yourself by Blanche Adams
Don't Say Yes When You Want to Say No by Herbert Fensterheim and Jean Baer

Remember, you have just as much right to the recreation you want and need as the next person, whether they have a disability or not. One way to be sure that you have the best possible chance to get what you want and need is to learn to be more assertive.



Resources...personal

One of the most important resources you can turn to as you move back into the recreation life of your community is **yourself**. As you think of your recreation choices and the barriers you may face as you make recreation plans, don't forget to think about your own resources. You can almost always depend on yourself for something.

Think of the kinds of personal resources you'll need to take part in recreation in the ways you're planning. See if they fit into categories of some kind.

Think of the kinds of resources you have that will make it easier for you to recreate in the specific ways you're planning.

If there's a difference between these two lists, you'll have to find ways to get rid of that difference or to make it as small as possible.

On the next page is another form, an important one. The "Recreation Activity Resources" sheet is designed to help you find resources for a particular recreation activity that you've named as one you want to take part in. The first part of it (the front) is supposed to help you figure out your personal resources for participating in that activity. Be sure to write down your personal resources in the spaces on the form. You can find more forms at the back of this manual in the Appendix.

We'll work on the second part of this form (the back) in the next unit, Unit 11.



Recreation Activity Resources

This form is designed to help you find those "personal" and "community" resources you can call on as you try to take part in a particular recreation activity.

We believe that doing the thinking and filling out the form will be helpful now and in the future. It's important that you think about each of the resource categories, and figure out what the resources are or could be for the activity listed.

This form can give you a really good idea of some of the barriers you may have to deal with, if resources are hard to find in some areas. It can also give you an idea of the kind of support you can count on as you follow your recreation interests.

Activity _____

Personal Resources

Financial (money you feel you can spend on this activity):

Transportation (ways you can get where the activity is):

Communication (ways you can get information about this activity):

Equipment (things you can use to take part in this activity):

Other Personal Resources:

Community Resources

Agency/Organization: _____

Phone: _____

Address: _____

Service Provided

Contact Person

Agency/Organization: _____

Phone: _____

Address: _____

Service Provided

Contact Person

Agency/Organization: _____

Phone: _____

Address: _____

Service Provided

Contact Person



Resources...community

Many recreation activities can be enjoyed in the comfort of your own home. However, your recreation choices may mean taking part in an activity offered by or in the community. You then need to look at the set of resources offered by the community itself.

The first thing you need to do to use community resources is to find out what they are. That means getting information, from whatever or whomever you can. Try to think of as many recreation information sources as you can. Some will be standard information sources, like the newspaper, the yellow pages, magazines. You might also look for federal and state government publications that you can send for. The more recreation information sources you can find, the better you'll know what local resources you can use for your recreation.

The next step is to find out which organizations provide the services or support that you and your recreation plans require, and give them a call. You may have to do a little guessing here, since the exact things you're looking for may not be easy to locate. But keep trying. Sometimes it's a little like a detective game. One source leads to another, which leads to another, and so on.

On the following page is a listing, the "Community Recreation Resource List", of some local recreation resources and some national organizations which may have local groups in your area that could provide you with more information.

Remember to stand up for yourself! You have the right to recreation. Be sure that the folks who run your community recreation resources know that you know that. You may even get them to start some new programs to meet your needs and the needs of other people who feel the same way you do.

On your "Recreation Activity Resources" sheet, there is space on the back for listing community resources which can help you with the particular activity covered by the sheet. We suggest writing these organizations down since you may want to refer to them over and over again.

Community Recreation Resource List

City Recreation Department
County Recreation Department
YMCA
YWCA
Universities and colleges
Churches
Schools
4H Clubs, Boys' Clubs, or Girls' Clubs
Parents Without Partners
Women's Clubs, Men's Clubs, Senior Citizen's Clubs
City Chamber of Commerce
Commercial facilities (bowling alleys, skating rinks, etc.)
Scouting programs
Local theater groups
Local library
Weight Watchers
Alcoholics Anonymous
Local stables
Welcoming organizations
Arts and crafts shops and hobby shops
Dance studios
Museums
Art galleries
Community concert associations
Volunteer service organizations
Bookstores
Garden Clubs

National organizations that can be contacted for local affiliates:

National Wheelchair Athletic Association
National Inconvenienced Sportsmen's Association
Boy Scouts of America and Girl Scouts of America, Scouting for
the Handicapped Division
4-H Youth Extension Service
National Wheelchair Basketball Association
American Wheelchair Bowling Association
American Camping Association
North American Riding for the Handicapped Association
National Amputee Golf Association
Association of Handicapped Artists
American Blind Bowling Association
U.S. Deaf Skiers Association
American Athletic Association of the Deaf
National Amputee Skiing Association
National Spinal Cord Injury Association



Before you're through with us...

Before you are through with this program, be sure you have a meeting with your recreation therapist. If possible, have some of the people in your "people resource network" there. This is the time you'll be making some plans that may involve them, plans for your continued recreation in your home community.

You should be doing several things at this meeting.

#1) Take one more look at your recreation plans and goals. See if you need to change these for any reason. If you think it would be helpful, ask your recreation therapist for advice here. She will give you her ideas if you ask, and maybe have some good ideas about other activities you might take part in or problems that you haven't thought of.

#2) Remember it's very possible that you haven't completed all of the units of the program. If this is the case, the meeting should be a time for you and your recreation therapist to sit down and come up with some plans for completing the rest of the program on your own with the help of family and friends. This may mean briefly going over the parts of your manual that you haven't covered, discussing some activities you might consider, and providing some instruction on how to use specific "forms" in the manual.

#3) Before you leave this conference try to be sure about what your specific recreation plans and goals are at this point, and, if necessary, how you will be able to take advantage of those parts of this program that you've missed.

#4) Get the phone number of your recreation therapist. She/he will be a good resource to consider as you look for ideas and information about your continuing recreation.

Then it's pretty much up to you. Recreation can and does contribute to our physical, emotional, and mental health. That contribution comes through involvement and participation. You can find both in your community if you try. Do everything you can to see that your recreation helps you to feel better, think better, and be better.

