

THE EFFECTS OF A THERAPEUTIC RECREATION
INTERVENTION ON THE SELF-CONCEPT OF PEOPLE WITH
PARKINSON'S DISEASE

PATRICK FALASTEIN

MASTER OF ARTS IN RECREATION STUDIES

August 2006

Presented to

Dr. Christine Blais
(Thesis Advisor)
Director / Associate Professor
University 1 / Disability
Studies

Dr. Jennifer Mactavish
(Internal Committee Member)
Professor
Physical Education &
Recreation Studies

Dr. Nancy Hansen
(External Committee Member)
Assistant Professor
Disability Studies

**THE UNIVERSITY OF MANITOBA
FACULTY OF GRADUATE STUDIES

COPYRIGHT PERMISSION**

**THE EFFECTS OF A THERAPEUTIC RECREATION
INTERVENTION ON THE SELF-CONCEPT OF PEOPLE WITH
PARKINSON'S DISEASE**

BY

PATRICK FALASTEIN

A Thesis/Practicum submitted to the Faculty of Graduate Studies of The University of

Manitoba in partial fulfillment of the requirement of the degree

OF

MASTER OF ARTS

PATRICK FALASTEIN © 2006

Permission has been granted to the Library of the University of Manitoba to lend or sell copies of this thesis/practicum, to the National Library of Canada to microfilm this thesis and to lend or sell copies of the film, and to University Microfilms Inc. to publish an abstract of this thesis/practicum.

This reproduction or copy of this thesis has been made available by authority of the copyright owner solely for the purpose of private study and research, and may only be reproduced and copied as permitted by copyright laws or with express written authorization from the copyright owner.

ACKNOWLEDGEMENTS

Firstly, I would like to thank my parents, especially my mother who instilled the value of education in me from a very young age. I would also like to thank my future wife, Jennifer Wild, for supporting me throughout this process. I would also like to thank all the members of my thesis committee for their time, patience and leadership. I've learned a lot from you all. A special thank-you to my thesis advisor Dr. Christine Blais who put in countless hours helping me, I have grown as a person as a result of our time together.

TABLE OF CONTENTS

LIST OF TABLES & FIGURES	3
ABSTRACT	4
INTRODUCTION	6
REVIEW OF LITERATURE	9
PARKINSON'S DISEASE	9
SELF-CONCEPT	19
LEISURE	34
Definitional Vantage Point	40
External	40
Internal	40
METHOD	49
Pilot Study	49
Research Question	50
Hypothesis	50
Participants	50
Design	52
Data Analysis	54
Methods	54
Facilities/Equipment	61
RESULTS	62
Comparison of Intervention Group PRE and Intervention Group POST	63
Intervention Group PRE and Non-Intervention Group PRE and Reference Group PRE	68
Comparison of Intervention Group PRE and Non-Intervention Group PRE	70

Comparison of Intervention Group PRE and Reference Group PRE	73
Non-intervention Group PRE and Reference Group PRE	76
SUMMARY OF RESULTS	78
DISCUSSION	81
Hypothesis	81
CONCLUSION	89
LIMITATIONS	92
FUTURE RESEARCH	93
REFERENCES	94
APPENDIX I- THE SELF-DESCRIPTION QUESTIONNAIRE - III	104
APPENDIX II- INTERVIEW SCHEDULE	109
APPENDIX III- APPROVAL CERTIFICATES	111
APPROVAL CERTIFICATE	112
APPENDIX IV- INTERVENTION	114
APPENDIX V- KRUSKAL-WALLIS RESULTS	122

LIST OF TABLES & FIGURES

FIGURE 1: MULTIFACETED HIERARCHAL MODEL OF SELF-CONCEPT	24
FIGURE 2: QUALITY OF LIFE "RESPONSE SHIFT"	32
FIGURE 3: RESULTANTS OF LEISURE MOTIVATION	41
FIGURE 4: POSSIBLE RELATIONSHIPS OF VARIABLES AFFECTION PEOPLE WITH PARKINSON'S DISEASE AND LEISURE PARTICIPATION	46
FIGURE 5: SHAVELSON HIERARCHIAL MODEL POST-INTERVENTION	64
FIGURE 6: RESULTANT RESPONSE SHIFT	66
FIGURE 7: LEISURE MOTIVATION BETWEEN GROUPS	69
FIGURE 8: RESULTANTS OF LEISURE MOTIVATION	87
TABLE 1: THE PARKINSONISM FAMILY OF DISORDERS	10
TABLE 2: STAGES OF PARKINSON'S DISEASE	12
TABLE 3: RESEARCH APPROACHES TO DEFINING LEISURE'	39
TABLE 4: LEISURE RELATED THEMES FROM FIVE INTERVIEWS WITH PEOPLE WITH PARKINSON'S DISEASE	50
TABLE 5: DEMOGRAPHIC DESCRIPTORS	51
TABLE 6: PROJECT DESIGN	55
TABLE 7: COMPARISON OF INTERVENTION GROUP PRE & POST	63
TABLE 8: COMPARISONS BETWEEN ALL GROUPS	68
TABLE 9: COMPARISON OF THE INTERVENTION (PRE) AND NON- INTERVENTION GROUPS (PRE)	71
TABLE 10: COMPARISON BETWEEN THE INTERVENTION AND REFERENCE GROUPS PRE	74
TABLE 11: COMPARISION BETWEEN THE NON-INTERVENTION AND REFERENCE GROUPS PRE	76
TABLE 12: SUMMARY OF AFFECTED TENETS	86

ABSTRACT

In 1976 Shavelson, Hubner, and Stanton introduced the concept of self-concept as a multidimensional hierarchical structure with a global perception of self as a person. The differentiation of global self-concept resulted in facets or domains of functioning including but not limited to academic, social, emotional and physical self-concepts. Using the Shavelson et al. (1976) hierarchal model of self-concept, the question of how Parkinson's disease can negatively influence every facet of self-concept was explored. The idea that a shift in health related quality of life takes place where Parkinson's disease could act as a catalyst thus altering an individual's internal standards of perceived quality of life. As well, research has shown (Stumbo & Peterson, 2000; Csikszentmihalyi & Klieber, 1991; Rhodewalt & Augustdottir, 1986; Haggard & Williams, 1992; Smith & Mackie, 1995; Csikszentmihalyi, 1991) that leisure can positively influence self-concept and overall quality of life.

The study took a mixed/quasi-experimental design. Participants were pre-tested using the Self-description Questionnaire III (Marsh, 1992). The groups were compared on Self-description Questionnaire III (SDQ) scores. Focused interviews have also been conducted with all the participants and analyzed using the key theme approach (Goetz & LeCompte, 1984) to determine if differences existed between groups. An analysis of pre/post-program test scores was preformed to determine the effectiveness of the intervention. Self-concept was measured at three points during the intervention, using the SDQ, in order to minimize threats to internal validity. Post intervention interviews were conducted in order to examine the degree of perceived effectiveness.

The results of the study suggest that participation in a therapeutic recreation intervention can increase the self-concept of people with Parkinson's disease.

The results lead to the conclusion that participation in leisure activities has the potential to increase self-concept under specific conditions: (a) if allowed to self select which group they would like to participate in, (b) if permitted to determine the intervention in terms of activity, (c) if allowed to determine when the intervention took place, and (d) where the intervention took place. The study was designed in this way purposefully as to allow the participants to impose as much control as possible over the intervention. By allowing the participants to take as much control over their participation as possible the participants were in charge of their self-determination and thus perceived competence. This in turn, was reflected in the participants' internal motivation and belief in ability or self-concept, as reflected through the Dattilo Resultant of Leisure Motivation Model (1999). As such the effects of the intervention did not impact the self-concept directly, rather through self-determination and perceived competence.

INTRODUCTION

The Canadian Therapeutic Recreation Association defines Therapeutic Recreation (TR) as “directed toward functional interventions, leisure education and participation opportunities. These processes support the goal of assisting the individual to maximize the independence in leisure, optimal health and the highest possible quality of life” (www.canadian-tr.org). The primary purpose of TR is “to provide recreation resources and opportunities in order to improve health and well being” (American Therapeutic Recreation Association; 1987).

The benefits of recreation and leisure have been stated since ancient times (Reynolds & O’Morrow, 1985). Only since 1930 however did the White House Conference on Child Health Protection raise a new concern for the rights and needs of people with disabilities. By the 1960s, people who provided recreation services in clinical settings wished to distinguish themselves as well as their practice from other services being offered. A study by Silson, Cohen, & Hill (1959) brought these issues to the forefront. The study was concerned “with organized recreation programs in hospitals and the people who conducted them” (Reynolds & O’Morrow, 1985; p.17). Reynolds & O’Morrow (1985) refer to a conference in 1961 which discussed “terminology, identified problems, considered the role and function of the specialist in recreation services...and proposed appropriate knowledge and skills to serve as the fundamentals of practice” (p.17), which gave rise to what we now recognize as TR. The National Council of Therapeutic Recreation Certification is a certifying board that outlines the competencies and standards required by a Certified Therapeutic Recreation Specialist (CTRS) in order

to practise in the United States. In Canada, the Canadian Therapeutic Recreation Association is in the process of “developing and promoting the adoption and implementation of Professional Standards for the delivery of Therapeutic Recreation Services” (<http://www.canadian-tr.org/>). Over the past 40 plus years of TR’s existence, one observation has held true: there is a compelling need for research in Therapeutic Recreation (Coyle, Kinney, Riley, & Shank, 1991). Compton (1989) indicated “an ongoing or systematic effort to conduct research aimed at demonstrating the efficacy of therapeutic recreation” (p.428). Although Compton (1989) published his paper 13 years ago, the need still exists today to systematically demonstrate the effectiveness of TR (Austin 2002).

Bedini (2001) described the field of TR as in danger of losing sight of the importance of conceptual development. Carruthers (1997-98) described the importance of the ability to carry out research in TR in order for the practitioner to “contribute to its development and sophistication as well as a demonstration of its effectiveness” (p.29). Stumbo & Hess (2001) stressed the importance of research to demonstrate the link between a TR intervention and the outcome(s) of that intervention. The criteria that need to be fulfilled in order to demonstrate the link between intervention and outcomes were outlined by Seibert (1991):

“There must be a body of empirical research- validated by repetition and rigorous peer review- that supports achievement of the desired outcome in a respectable number of cases; and the outcomes that we intend to achieve, and demonstrate that we can achieve, must be ones that are valued by third party players. (p.7)”

Specifically, the study addressed the issue of self-concept improvement through the use of TR principles in people with Parkinson's disease.

In order to do this the three concepts previously introduced were integrated. In other words Shavelson, Hubner, & Stanton's (1976) model of self-concept was applied to Parkinson's disease in order to examine the potential of leisure to positively change each component. The Spranger and Schwartz (2000) "Response Shift" model was introduced in order to demonstrate how a diagnosis of a chronic condition such as Parkinson's disease could result in a negative shift in health related quality of life. It was hypothesized that leisure could potentially act as a catalyst for positive change in health related quality of life.

The purpose of this study was to understand how participation in a therapeutic recreation intervention could increase global self-concept of people with Parkinson's disease.

REVIEW OF LITERATURE

This study sought to examine how a therapeutic recreation intervention could influence the self-concept of people with Parkinson's disease. In order to do this three concepts were explored. Self-concept, the Shavelson, Hubner, and Stanton (1976) model of self-concept served as the operationalized model of self-concept. A diagnosis of Parkinson's disease, how it has the potential to negatively impact the self-concept using the Spranger & Swartz (2000) health related quality of life response shift. Recreation therapy/leisure, applying Spranger & Swartz (2000) quality of life response shift to leisure participation through the Dattilo (1999) resultants of leisure motivation, it has also been demonstrated how leisure participation has the ability to influence the self-concept positively if individuals are self-determined and have a perception of competence. Through a review of literature the Shavelon et al. (1976) model was applied to Parkinson's disease and leisure participation.

PARKINSON'S DISEASE

Parkinson's disease is not a condition in and of its self, that is, it is a disease within a category of diseases known as Parkinsonism. "Parkinsonism refers to a clinical syndrome characterized by a variable combination of tremor, bradykinesia or akinesia, rigidity and postural instability" (Sethi, 2003, p. 43). The most common type of Parkinsonism is Parkinson's disease.

Parkinson's disease is a common disease with significant prevalence in Canada. Moghal, Rajput, C., D'Arcy, Rajput, (1994) found that 3% (3000/100,000) of a

representative sample of community residents 65 years and older were diagnosed with Parkinson's disease. A separate study of Moghal, Rajput, C., Meleth, D'Arcy, Rajput, (1995) found the prevalence rate was 9% (9000/100,000) in institutionalized older adults; significantly higher than their 1994 result, but under different conditions. Stern & Lees (1991) reported that the incidence of Parkinson's disease increases to one in one-hundred between the ages of sixty to eighty years. The Parkinson's Disease Society (1990) estimate that one in seven people with Parkinson's disease developed it in their thirties or forties.

By definition Parkinson's disease "is a neurodegenerative disorder resulting from a loss of dopaminergic neurons and disruption of motor control pathways" (Koplas, Gans, Wisely, Kuchibhstls, Cutson, Gold, Taylor & Schenkman, 1999, p. M197). In other words, Parkinson's disease is a progressive brain disorder. Parkinson's disease is the result of nerve cell impairment or death in the section of the brain known as the *substantia nigra*.

Table 1: The Parkinsonism family of disorders

Pure Parkinsonism	Parkinsonism with other features	Pseudo-parkinsonism
Parkinson's disease	Progressive supranuclear palsy	Essential Tremor
Drug-induced parkinsonism	Multiple system atrophy	Vascular (or arteriosclerotic pseudoparkinsonism)
Postencephalitic parkinsonism	Basal ganglia calcification	
MPTP parkinsonism	Repetitive head trauma	
Other toxins, e.g. manganese	Cerebral anoxia	

Within a typically functioning brain, these cells produce dopamine, which is responsible for muscular movement (Greene, 2000; p. 79). When approximately 80% of dopamine producing cells become impaired an individual may begin to exhibit the symptoms associated with Parkinson's disease. The loss of dopamine is responsible for the four cardinal symptoms of Parkinson's disease: rigidity (stiffening of the muscles), tremor, bradykinesia (slowness of movement) and postural instability (Canter et al. 1961). Tremor, rigidity, bradykinesia, and postural instability all occur as "direct effects" of Parkinson's disease (Schenkman & Butler, 1989a). These direct effects may, in turn lead to the indirect or secondary musculoskeletal effects of the disease--stooped posture, kyphosis, head flexion, shoulder protraction, and knee or elbow contractures--that further impair physical performance (Schenkman & Butler, 1989a, Schenkman & Butler, 1989b). Other symptoms and signs of Parkinson's disease include muscle aches or cramps, depression, dementia, dysarthria, dysphagia, orthostatic hypotension, bladder problems, and sexual problems (Jankovic, 1988, 1992). The direct and indirect impairments of Parkinson's disease contribute to functional limitations that are particularly apparent in activities of daily living. Cognitive deficits such as memory loss, psychological dysfunctions, such as depression and emotional ability, add confounding dimensions to the individual's functional status and quality of life.

Assessment of Parkinson's disease is through "subjective assessment of parkinsonian disability" (Sethi, 2003, p. 91). Clinical assessment given the "variability of disease presentation, progression, and response to medication often makes diagnosis uncertain" (Marek, Jennings, & Seibyl, 2003, p. 83). Meara, Bhowmick & Hobson (1999) found that of 402 cases, Parkinsonism was confirmed in 297 and clinically

probable Parkinson's disease in 213 cases. The most common causes of misdiagnosis were essential tremor, Alzheimer's disease and vascular pseudo-parkinsonism. Over one-quarter of subjects did not benefit from anti-parkinsonian medication.

Hoehn and Yahr (1967) developed the Staging of Parkinson's Disease, a scale that is the most widely used method of describing levels of Parkinson's disease (Sethi, 2003). Hoehn and Yahr (1967) identified five stages through which people with Parkinson's disease progress. It is important to note that not all people with Parkinson's disease will progress through the later stages.

The experience of chronic illness can be linked with the environmental conditions, material resources and demands of contemporary culture and social structure (Vernon & Stern, 1988). Although its importance cannot be denied, focusing on the medical approach is insufficient as it does not encompass all the areas of the individual's life that are affected by the disease.

Table 2: Stages of Parkinson's Disease

Stage	Symptoms
1	Symptoms on only one side of the body
2	Symptoms on both sides of the body and no difficulty walking
3	Symptoms on both sides of the body and minimal difficulty walking
4	Symptoms on both sides of the body and moderate difficulty walking
5	Symptoms on both sides of the body and unable to walk

Note. From "Parkinsonism: onset, progression and mortality," by M. M. Hoehn and M.

D. Yahr, 1967, *Neurology*, 17, p. 427-442.

It has been suggested that there should be a re-orientation of focus for care from repairing damage caused by the disease to education and understanding for living with chronic

illness (Vernon & Stern, 1988). The increase of understanding of diseases such as Parkinson's disease has not been accompanied by an increase of awareness of the effects such diseases exert on the individuals' lives. It is therefore important to highlight the difficulties and dilemmas likely to be encountered during the course of living with different conditions and the changing needs (Vernon & Stern, 1988).

As previously mentioned there is a link between the symptoms of Parkinson's disease and the Shavelson et al. (1976) model of self-concept (Figure 1). According to the Shavelson et al. (1976) model of self-concept, it appears that Parkinson's disease has the potential to impact both the academic and non-academic domains of self-concept. Where non-academic domains focus on the emotional, physical and social self and the academic domains represent the intellectual self. The following is a discussion of the areas of a person's life that Parkinson's disease can influence, focusing on societal implications, social activities, self-image, sexuality, education and psychological implications.

The word stigma, from the Greek, means something bad or unusual about a person (Goffman, 1963). This definition puts the emphasis on the individual as being somehow dysfunctional, which is not the case. Stigmatization is "the process by which a *society* bestows its own negative meaning on the behaviours, signs, or attributes of an individual" (Joachim & Acorn, 2000, p. 39). Burish and Bradley (1983) suggest that chronic illness, much more than infectious disease is a social phenomenon.

Concurrently, Joachim & Acorn (2000) suggest that society and social values are the source of stigmatization. Carr (1999) uses the term handicap to refer to "the social consequence of disease...specific to individuals and depends not only on the severity of

disease, but also on his/her life role” (p. 230). As such handicap is a social construct that “refers to societal circumstances that hinder people from performing their activities” (Üstün et al., 1995, p. 206). In order to cope, people construct representations of their problems in order to set into action plans to deal with them. The social environment does much to structure these representations and hence coping mechanisms are altered. Therefore, the impact of a chronic condition such as Parkinson’s disease depends on the symptomatic progression of the disease, as well as the manner in which society as a whole, including family, friends and health care professionals react, and the attitude of these people towards the individual.

Parkinson’s disease can be very socially isolating chronic disease, especially when mobility is impeded which in turn causes social isolation (Vernon & Stern, 1988). As well, speech often becomes quiet and indistinct thus making communication difficult, especially on the telephone, severing basic external linkages. The various symptoms can be socially uncomfortable to the point of an individual imposing “a limitation on his socializing out of embarrassment; disengagement from social contacts may be accentuated if the individual is embarrassed or easily frustrated by his symptoms” (Vernon & Stern, 1988, p. 107). Tremors can cause spillage of food and drink and, dribbling often causes a feeling of being socially unacceptable. Even when people with Parkinson’s disease have overcome these difficulties and enter a social situation they can encounter further difficulties. For example, it has been found that “non-handicapped people prefer to avoid social contact with the disabled or behave more formally and in distorted ways if forced to interact with handicapped persons” (Asch 1984, p. 531).

Furthermore, Asch (1984) found that people without disabilities have trouble seeing past the visible disability in interactions in people with disabilities.

Schrag et al (2003) describe the development of Parkinson's disease "as premature aging" (p. 1250). Singer (1973) views the premature aging associated with Parkinson's disease as a social cost since the natural process of aging includes social withdrawal and disengagement. This is consistent with the Cumming and Henry's (1961) Disengagement Theory of Aging, which proposed that through the normal course of aging, people begin to withdraw or disengage from social roles as a natural response to lessened capabilities and diminished interest, and to societal disincentives for participation. The social cost of Parkinson's disease according to Singer (1973) also includes the fact that people with Parkinson's disease are less likely to engage in household tasks or to have a close circle of friends. People with Parkinson's disease are more likely to spend time pursuing solitary leisure activities such as watching television, reading, and being much more likely to spend time napping and in idleness (Singer, 1973).

Additionally the Manitoba Ministry of Transportation and Government Services has included Parkinson's disease among the list of conditions that must be reported (telephone conversation with the medical records office, 04/29/04). This results in the individual's medical history being followed by the board and can lead to prohibition or restriction of driving, thus imposing a further hindrance on an individual's activities and independence. While the public safety reasons for this stipulation are clear, the social impacts it has on the individual are not addressed through traditional medical treatments for Parkinson's disease.

Symptoms of Parkinson's disease are largely related to motor functioning and as such can directly impact an individual's self-image, "in chronic, progressive illness symptoms worsen, so that many affected individuals feel they cannot trust their bodies to perform consistently" (Teichberg, 2000, p. 163). Chrischilles, Rubenstein, Voelker, Wallace, & Rodnitzky (2001) conducted a study to examine the relationship between clinical symptoms and health-related quality of life in people with Parkinson's disease. The authors reported that tremors had an "unexpectedly strong effect on general health perceptions and mental health" (p. 206). Parson (1975) reported there is a social expectation that accompanies sickness, that an individual is exempt from normal social roles.

The imposition of role change can affect an individual's self-esteem and sense of stability to varying degrees dependant on the importance the individual assigns to each role(s) (Vernon & Stern, 1988). As such, an illness such as Parkinson's disease can threaten self-image, personal identity, restricting normal lifestyle and disrupting normal and established patterns of social interaction which "leads to experiences of loss of hope and mistrust as the sick elder has to accommodate the incapacity and the dependence on caregivers in dealing with the first dependence [sickness]" (Agich, 2003, p. 105). People with Parkinson's disease may feel the need to relinquish key roles, accept dependence on others and revise values, expectations and limitations, "serious illness may lead to changing images of the self and the future and to the loss of social roles" (MacCarthy & Brown, 1989, p. 49). There is research to suggest that the human "sense of self" is dependant upon the prefrontal cortex (McNamara, Durso & Brown, 2003) and Parkinson's disease "is associated with mild to severe frontal lobe dysfunction" (p. 140).

As such, an individual's sense of self may be altered through the progression of Parkinson's disease even if the individual does not experience any physical symptoms or role change.

To assist individuals with Parkinson's disease in adjusting and coping with the illness, the social context within which they live must be taken into consideration. The individual is not an isolated creature in a ward rather, a functional part of a complex social structure. Ideally, the individual would remain a part of the social structure. In addition, an attempt must be made to allow the individual to maintain independence and a positive concept of self, with realistic goals and expectations. "Understanding the factors that weigh most on the individual's own perception of themselves and their disease, will lead to appropriate medical and social interventions that would improve the individual's well-being and would help modify health related quality of life deficits" (Cubo et al, 2002, p. 592). Vernon & Stern (1988) report that "successful adjustment to Parkinson's disease is dependant not only on medication, but on those services and support systems that provide emotional support and enhance independence and self-care" (p. 113).

The psychological aspects of Parkinson's disease include a complex mixture of drug effects and depression, as well as the influence of cortical atrophy and the normal aging phenomenon. For persons with Parkinson's disease, there are generally four psychological changes that may occur: depression, dementia, sleep disturbances, and hallucinations (Herndon C., Young, Herndon, A. & Dole, 2000). Furthermore, these symptoms can occur as a result of decreased dopaminergic activity or through the supplementation of dopamine by medication.

Depression is common in Parkinson's disease with prevalence rates which "range from 7% to 90% (although 40% is the most frequently cited estimate)" (Troster & Woods, 2003, p. 139). Juncos & Watts (2003) cite depression as being "the single most important contributor to poor quality of life [in people with Parkinson's disease]" (p. 164). Subsequently, depression has been "shown to adversely impact on functional ability and accelerate the progression of cognitive decline in PD" (p. 139). The cause of depression amongst people with Parkinson's disease is generally held to be multifactorial including a manifestation of neurodegeneration and reactive depression. The research is inconclusive as to depression being a *symptom* of Parkinson's disease or a personal *reaction* to Parkinson's disease. Juncos & Watts (2003) suggest there is some evidence that depression is an intrinsic part of Parkinson's disease rather than a reaction to disability. Other disturbances that may be exhibited include anxiety and feelings of isolation and deprivation. These disturbances can be dealt with pharmacologically or by medical professionals.

Dementia is another psychological disturbance associated with Parkinson's disease. Juncos & Watts (2003) estimate the prevalence of dementia occurring in 20-30% of people with Parkinson's disease. Dementia in Parkinson's disease "involves multiple cognitive impairments and a related decline in day-to-day functioning" where cognitive impairments can include: bradyphrenia (slowness of thought processes), memory retrieval deficits, executive dysfunction, diminished spontaneity, and depression (Troster & Woods, 2003, p. 136). Delusions and hallucinations are also psychiatric symptoms of Parkinson's disease, however it is unclear if these symptoms are a result of dementia or if they are drug-induced. Drug-induced psychotic symptoms of Parkinson's

disease “are typified by formed visual hallucinations with retention of insight” (Junco & Watts, 2003 p. 166). Whereas the presence of auditory hallucinations indicate “coexisting psychotic depression or dementia” (p. 166).

Sleep disturbances are also a frequent aspect of Parkinson’s disease. The cause of sleep disturbances, similar to depression and delusions, is not clear “it may be a part of a primary sleep disorder or it may be secondary to advancing PD or comorbid depression or dementia” (p. 69).

Symptoms related to Parkinson's disease can have far reaching results. The physical self can be affected through tremor, muscle cramping, or dysphagia causing limitations in mobility. The emotional self can be affected through changes in normal role functioning which in turn can have consequences on an individuals’ self-esteem and self-image. The cognitive self can be affected through memory loss, hallucinations or delisusions.

SELF-CONCEPT

Human beings are the only animal with the capacity to reflect on themselves and their capabilities. The term self-concept is often used to describe an individual’s perception of his/her self and capabilities. Self-concept can be defined as “the total set of a person’s cognitive representatives of him or herself which are stored in the memory” (Pekrun, 2001, p. 1380). Cognitive representations are formed first through experiences (observable) with an individual’s environment (Marsh & Yeung, 1998, p. 509) and then through “other constructs which are themselves related to the observable” (Shavelson, Hubner, & Stanton 1976, pp410). ‘Other constructs’ refer to interpretations of

environmental experiences. Furthermore, self-concept can be divided into experientially specific domains such as academic, athletic (Shavelson et al. 1976), social status (Pekrun 2001), or any other attribute (cognitive ability, body image etc.). Shavelson and Bolus (1982) define self-concept through seven critical features: organized, multifaceted, hierarchical, stable, developmental, evaluative, and differentiable.

The organizational aspect of self-concept refers to individuals' tendencies to classify information about themselves into categories and relate categories to one another. Facets reflect the individual's category system. Self-concept is hierarchal, with perceptions of behaviour at the base moving upward toward inferences about self in subsets (academic, physical, cognitive etc.).

Inferences about the overall self are gradually formed as one moves from base to apex of the hierarchy. Overall self-concept is stable but as one moves from apex to base of the hierarchy self-concept becomes more situationally specific and therefore less stable. Self-concept becomes increasingly multi-faceted as the individual moves from infancy to adulthood. Self-concept can be descriptive (e.g., I am happy) and evaluative (e.g., I am good at hockey). In addition, it can be differentiated from other constructs such as academic achievement.

Wylie (1979), on the other hand defines self-concept as having three components: (a) Cognitions and evaluations regarding specific aspects of self, referred to as the perceived self; (b) the ideal self represents the set of traits, competencies, characteristics, and values that the individual would like to possess (Leonard, Beauvais, & Scholl 1995, p. 6); and (c) overall self-regard, a generic term to cover global constructs such as self-

esteem, self-acceptance, etc. “discrepancies which are presumably determined by some combination of cognitions and evaluations of many attributes of self” (Wylie, 1979).

Self-concept is developed very early in life and remains relatively stable upon establishment, in other words, “people who have developed self-pictures early in life frequently continue to hold these views long after the actual self has radically changed” (Rosenberg 1979, p. 58). Anderson (1952) argued that “each year of life becomes less influential in the development of self-concept, until the image is essentially complete before adolescence” (p. 224). Other theorists who have identified the development of self-concept at beginning stages of life are Erikson (1963), Jacobson (1964), Mead (1934), and Dickstein (1997).

William James (1890/1963) has been credited as the first psychologist to develop a theory of self-concept. Four concepts developed by James were particularly important:

1. The I (self-as-knower or active agent) and Me (self-as-known or the content of experience).
2. The multifaceted, hierarchical nature of self-concept.
3. The social self based on recognition individuals receive from their peers or a hypothetical higher authority.
4. Self-esteem as the ratio of success to pretensions and the function of an activity’s perceived importance (Marsh & Hattie 1996; Marsh, Byrne, Shavelson 1992).

Hence, James’ theory held that “a person’s overall self-evaluation reflects all the different *Me*’s weighted according to their subjective importance” (Marsh, Byrne, & Shavelson, 1992, p. 46). James’ theory has formed the foundation for other theories of self-concept. Soars and Soars (1977) developed structural models of self-concept in which “theoretical

considerations from Spearman, Thurstone, Cattell, Guilford, and Piaget comprise the foundation for the discussion of self-concept theory” (Soars & Soars, 1977, p. 1). Marx and Winne (1978) viewed self-concept as a unidimensional construct where the facets of self-concept are dominated by one global factor. Multidimensional independent and correlated factor models were also developed to represent self-concept (Soars & Soars 1977, 1982, 1983). In these models, self-concept was comprised of several facets (academic, social, physical), which differ in the degree to which the multiple dimensions are correlated. In the independent model (James, 1890/1963), the facets are completely independent of one another. In correlated factor models there is an interaction between facets. Research in multidimensional models identified second order facets such as verbal skills and mathematics (from academic) which imposed a hierarchical structure to self-concept (Hattie, 1992; Marsh 1990). Shavelson, Hubner, and Stanton (1976) conducted a review of theoretical and empirical research in order to develop a theoretical model of self-concept that incorporated aspects from most theoretical positions of the time. The work of Shavelson et al. (1976) will serve as the frame of reference for this project as their work “is the most extensively validated model of self concept to date and the development of many recent measures of self-concept are theoretically linked to this hierarchal model” (Byrne, 1996, p. 23).

The Shavelson et al. (1976) identified seven tenets “as critical to the construct definition” (p. 411):

1. It is organized or structured: people categorize the vast amount of information they have about themselves and relate these categories to one another.

2. It is multifaceted: the particular facets reflect a self-referent category system adopted by a particular individual and/or shared by a group.
3. It is hierarchical: perceptions of persona behaviour in specific situations at the base of the hierarchy, inferences about self in broader domains (e.g., social, physical, and academic) at the middle of the hierarchy, and a global, general self-concept at the apex.
4. It is hierarchical: the hierarchical general self-concept—the apex of the hierarchy is stable, but as one descends the hierarchy, self-concept becomes increasingly situation-specific and, as a consequence, less stable. Change in self-perceptions at the base of the hierarchy may be attenuated by conceptualizations at higher levels, and changes in general self-concept may require changes in many situation-specific instances.
5. It is developmental: self-concept becomes increasingly multifaceted as the individual moves from infancy to adulthood.
6. It is both a descriptive and an evaluative: evaluations can be made against some absolute ideal, a relative standard based on comparisons with peers, or the expectations of significant others.
7. It can be differentiated from other constructs to which it is theoretically related (p. 411-415).

Through the seven tenets Shavelson et al. (1976) developed the following illustration as an example of the hierarchical organization of self-concept (see Figure 1).

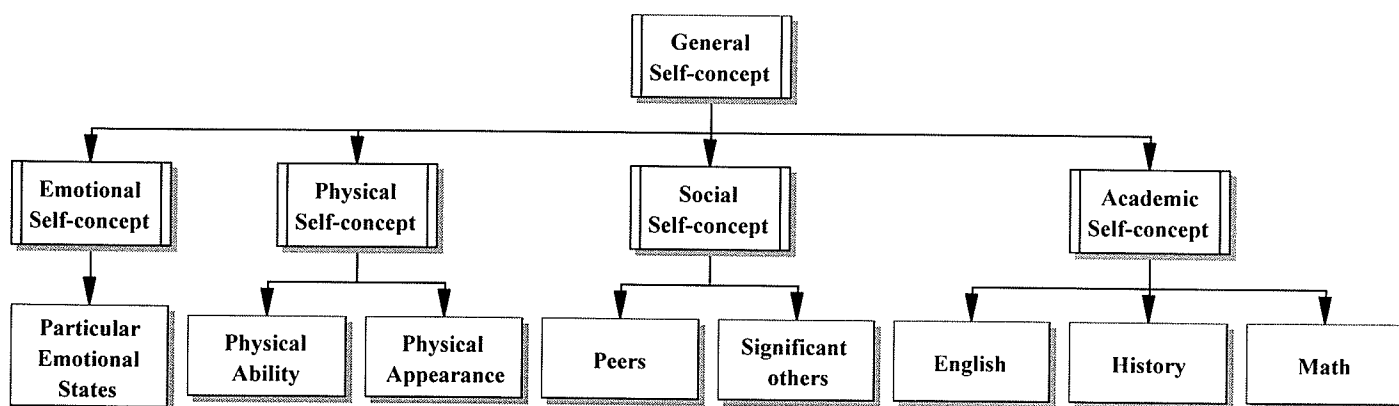
The Figure is important “because it provided a blueprint for a new generation of

multidimensional self-concept instruments that have had significant influence on the field” (Marsh & Hattie, 1996, p. 59).

General self-concept, at the apex, of the structure is divided into academic and non-academic domains (see Figure 1). Each domain is further divided into more specific components such as school subjects (within the academic domain) each of which could be broken down further to component parts. Important to note is that this is a *possible* representation of self-concept, it is not *the* representation.

As addressed by Shavelson et al. (1976) self-concept is formed in early life through interactions with the environment and caregiver. Furthermore, the uniqueness of the time and space in which an individual had an upbringing results in “a different belief system from which to view the world” (Hattie, 1992, p. 98).

Figure 1: Multifaceted Hierarchical Model of Self-concept



Shavelson, R.J., Hubner, J. J., & Stanton, G. C. (1976). Validation of Construction Interpretations. *Review of Educational Research*, 46, 407-441.

Although one individual may hold certain beliefs about him/herself, a second individual may hold similar beliefs regarding the first; however, they would not be identical. “There are commonalities across individuals and these refer to the structure and process of self-concept” (p. 98). It would however be reasonable to expect commonalities between

individuals raised in a similar environment or raised under similar socioeconomic status. An individual's perspective of self relates directly to the group on which a comparison is being formed, for example, an excellent hockey player at the high school level may experience a decrease in self-concept when he/she plays at the university or elite level where he/she may be close to the bottom of the talent pool. In the example of the hockey player, his/her athletic self-concept would decrease but this may or may not result in a decrease in overall self-concept. The overall self-concept would be affected to the degree that the hockey player identified with athletic self-concept.

Self-concept also influences individual behaviour. As self-concept is derived from behaviours and interactions, it would be logical that the developed self-concept would have an influence on behaviour. Self-concept is not behaviour in the direct sense however, it serves to guide, mediate and regulate how an individual behaves. The self-concept acts as a guideline at an executive level setting goals, leaving for other processes, scripts, the execution of intents. The self "sets goals, has intents, and evaluates, while the scripts are executed through simpler processes of associations, learning, and overlearned response patterns" (Lewis & Brooks-Gunn, 1997, p. 26). Through the self-concept, an individual is able to act within his/her belief system and react to environmental stressors.

The action/reaction to environmental stressors leads to a debate in the literature on self-concept. The debate surrounds the extent, if any, self-concept can be influenced by situations and significant others. The two opposing paradigms are the *mechanistic* and *constructivist* views. The mechanistic paradigm holds that the information, in the form of a stimulus (from environment or person) is more important than an individual's interpretation of the stimulus. The "organization and control of behaviour is mediated by

the environment and not the individual” (p. 107). From this perspective, self-concept is as a reaction to external stressors. Thus, the locus of control is external to the individual because there is not an individual interpretation only a reaction. The constructivist view is the reverse. The constructivist paradigm holds that an individual has a hand in shaping the environment. Moreover, a stimulus is received by an individual and interpreted according to that individual’s subjective beliefs (via the self-concept). The individual then acts upon the environment according to interpretation.

Currently, there are many instruments being used to measure self-concept. Wylie (1989), Hattie (1992), and Strein (1995) argue that self-concept has historically been “an illusive and poorly defined construct” (Strein, 1995, p. 71). Wylie (1989) points out that there are a number of terms that have been mistakenly used interchangeably with self-concept: body-image, self-worth, self-acceptance, and self-esteem are some of the most common. For example, from a review of literature, Shavelson et al. (1976) determined 17 unique conceptual dimensions on which self-concept definitions could be defined.

Another issue, previously mentioned, is the “assumed synonymy of terms” (Byrne, 1996, p. 2). Byrne illustrates that the problem of synonymy is compounded as researchers move away from a global evaluation of self towards the situationally specific. For example the term academic self-concept is commonly used as a basis for research, however it reflects a subjective descriptive (I like math) and an objective evaluative (I do well in math) aspect of self-perception. Shavelson et al. (1976) noted that often researchers make no distinction made between the descriptive and the evaluative, either conceptually or empirically.

When considering the actual 'self-concept' measurement tools there are "a small number of instruments with acceptable levels of reliability and construct validity" (Hattie, 1992, p. 141). Nearly every measurement tool is placed into one of two categories: (a) unidimensional/global models or, (b) multidimensional/domain-specific models. The important distinction is whether "self-concept is viewed as an overarching, global characteristic of the person, or as a set of self-evaluations specific to different domains of behaviour" (Strein, 1995, p. 72). Within the unidimensional perspective there are two theoretical frameworks, the nomothetic model and the "true" unidimensional model. The nomothetic model "represents the oldest and most traditional view of self-concept, and was first labelled as such by Soares and Soares (1983)" (Byrne, 1996, p. 9). The nomothetic model of self-concept makes an overall measure using overlapping facets of information. Essentially the nomothetic measure utilizes information from different content areas, i.e. academic, athletic, social etc. self-concepts, given equal weights then summed to yield a total score of self-concept. As the name suggests nomothetic or global model self-concept measurement tools attempt to encompass an individual's view of him/her self; they are "sometimes conceptualized as self-esteem or general self-concept" (Strein, 1995, p. 71).

Rosenberg (1979) developed a unidimensional view of self-concept that differed from the nomothetic view. Byrne (1996) distinguishes Rosenberg's view as "the 'true' unidimensional model" (p. 14). The distinguishing characteristic is that the nomothetic model "assumes that sense of global self-worth is a simple additive combination of item responses that tap attributes or competencies representing content-specific domains" (p. 15). Whereas the 'true' unidimensional model is comprised of a number of scales of self-

concept, each of the scales yields a *weight* which a component will contribute to the overall self-concept. The 'true' unidimensional model measures global self-concept "directly and makes no attempt to tap the more specific self-perceptions, which, for Rosenberg, are quite likely combined in a very complex and obscure manner of which the individual is unaware" (p. 15).

Multidimensional models of self-concept are vast in numbers. Byrne (1996) identifies four such models: (a) Independent-factor model, (b) Correlated-factor model, (c) Compensatory model, and (d) Hierarchical model. Although all the listed models differ in application, their conceptual framework is somewhat general. That is, multidimensional model(s) measurements provide "multi-faceted models of stress self-evaluations of specific competencies or attributes" (Strein, 1995, p. 71) for example academic, athletic, or physical self-concept. One such example is James' (1980) hierarchal model of self-concept. James (1980) contends that there were four dimensions of self-concept: body and material, social, spiritual, and the pure ego. He argues that "these were hierarchically ordered according to their worth and that self-concept was the sum of all these attributes" (Hattie, 1992, p. 58). There are many multidimensional models of self-concept, "philosophers have proposed groupings of appraisals but, unfortunately, they have rarely been tested...there is little justification for supporting one set of descriptions over another" (p. 58).

The Shavelson et al. (1976) model of self-concept, adopted in this study for its extensive validity, is in the multidimensional category. As illustrated in Figure 1, Shavelson et al. (1976) "portrayed a multidimensional and hierarchally ordered structure, with global perceptions of self as a person at the apex and actual behaviour at the base;

moving from the top to the bottom of the hierarchy, the structure becomes increasingly differentiated” (Byrne, 1996, p. 22). Within this model, actual behaviour can resonate back up the hierarchy thus influencing the global self-concept. The interaction between behaviour and general self-concept, coupled with the common ground between construct definition and measurement, makes the Shavelson et al. (1976) model particularly useful in this research.

The various symptoms of Parkinson’s disease and their impact on social, physical, cognitive and psychological functioning have been presented. The sum of the impacts of Parkinson’s disease can be described in terms of *one* impact on quality of life. The World Health Organization defines quality of life as “an individual’s perception of the position in life in the context of the cultural and value systems in which they live and in relation to their goals, expectations, standards and concerns” (Orley, 1992, p. 277).

There is a link between the symptoms of Parkinson’s disease and the Shavelson et al. (1976) model of self-concept (Figure 1). The symptoms of Parkinson’s disease negatively influence every facet and sub-facet of self-concept. As mentioned earlier in this paper, self-concept can be defined as “the total set of a person’s cognitive representatives of him or herself which are stored in the memory” (Pekrun, 2001, p. 13800). The following discussion will demonstrate how objective experiences of the individual are impacted by Parkinson’s disease, which subsequently results in a shift in the subjective interpretation of the experiences.

Several previous studies have investigated the relationship between individual education regarding Parkinson’s disease and health-related quality of life (HRQOL) for people with Parkinson’s disease (The Global Parkinson’s Disease Survey (GDPS), 2002;

Mongomery, Lieberman, Singh, & Fries, 1996; Mercer, 1994). Montgomery et al. (1996) demonstrated, in a randomized controlled trial, that individual education about Parkinson's disease and health promotion programs improved activities of daily living and HRQOL in individuals with Parkinson's disease. Furthermore, Cubo, Rojoa, Ramosa, Quintanac, González, Kompolitib & Aguilara (2002) demonstrated that individual's education level i.e. years at school, also contributes to better management of Parkinson's disease: "subjects with higher educational background may be more aware about their physical and psychological needs resulting in a better search and access to better health care resources" (p. 591).

Schrag, Hovris, Morley, Quinn, & Jahanshahi (2003) describe the development of Parkinson's disease "as premature aging and impairment of occupational performance, increasing dependency on family members, role reversals as well as the longer disease duration may result in more profound physical, economical, and psychosocial consequences"(p.1250). Parkinson's disease has the potential to impact not only every facet of the Shavelson et al. (1976) but also every facet of human existence. As such, it is reasonable to state that Parkinson's disease can produce a negative change in self-concept.

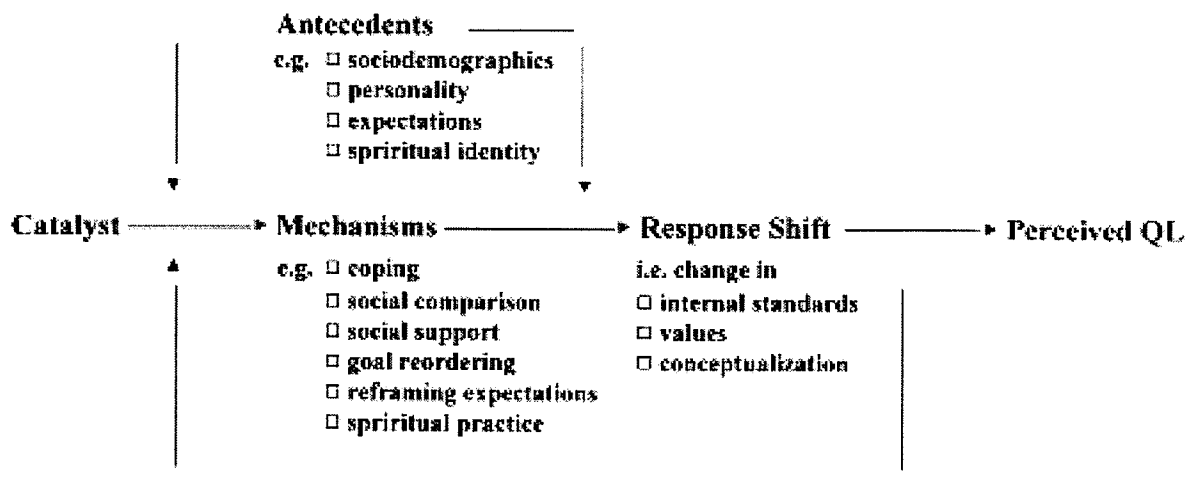
Quality of life cannot be defined strictly in terms of health status, morbidity, or life-satisfaction. A more encompassing view would incorporate "individual's perception of these and other aspects of life" (Callahan, 1987, p. 1). To operationalize a definition this broad proved difficult for many researchers, thus the term health-related quality of life was introduced as it applies to a more narrow state of well-being. Padilla & Frank-Stromborg (1997) provide this definition: "Health-related quality of life is the value

assigned to duration of life as modified by the impairments, functional states, perceptions and social opportunities influenced by disease, injury, treatment or policy” (p.114). This definition now includes the effects of medical conditions of the individual from both an objective (functional status), as well as a subjective (individual perceptions) view point. Stewart, Abby and King (1991) conceptualize health related quality of life outcomes in terms of two broad categories. The first category is “functioning” which is divided into three conditions that can be objectively measured: physical functioning, cognitive functioning/mental abilities and activities. The second broad category is subjective “well-being” which includes bodily-well being, emotional well-being, self-concept and global perceptions.

Following the diagnosis of a chronic disease, a shift in perceived health related quality of life can be expected. In the case of Parkinson’s disease, the progression of the disease does have the ability to impact both the objective and subjective aspects of health related quality of life. Fitzsimmons & Bunting (1993) and Shindler, Brown, Welburn & Parkes (1993) found the following conditions associated with Parkinson’s disease to contribute to a decrease in quality of life: gait disorder and slowness, freezing, falls, troubles in manual ability for activities of daily living, drooling, dysphagia, depression, social embarrassment, communication problems, sleep disorders, fatigue, painful spasms, withdrawal, social isolation, loss of hobbies and leisure activities, driving inability, severe dyskinesias, and hallucinations and delirium associated with dopaminergic drugs. Sprangers & Schwartz (2000) define this change as a “response shift” (see Figure 2) which they refer to as “a change in the meaning of one’s self-evaluation of a target construct as a result of (a) a change in the respondent’s internal standards of

measurement; (b) a change in the respondent's values; or (c) a redefinition of the target construct" (Sprangers & Schwartz, 2000; p. 12).

Figure 2: Quality of life "response shift"



Spranger, M & Swartz, C. (2000). *Adaptation to Changing Health: Response shift in quality-of-life research*. Washington DC: American Psychological Association.

The five components listed in Figure 2 (catalyst, antecedents, mechanisms, response shift and perceived QoL) represent how the diagnosis or change in health status acts as a "catalyst" affecting the behavioural, cognitive, and affective "mechanisms" which the individual uses to process the catalyst. This in turn leads to a response shift or "a change in the meaning of one's self-evaluation of quality of life as a result of changes in the internal standards, values and the conceptualization of QoL" (Sprangers & Schwartz, 2000, p. 14). The "antecedents" refer to relatively stable characteristics of an individual, such as gender, education, expectations, self-image, and personality that influence the manner in which an individual processes the catalyst.

LEISURE

The response shift is not limited to chronic conditions, for example leisure can take the form of the 'catalyst'. In such a scenario, leisure can assist the 'mechanisms' in shifting the internal standards of the individual. The benefits of leisure are numerous and the human psyche is not excluded, "leisure can provide both the context and experiences necessary to improve psychological and emotional well-being" (Stumbo & Peterson, 2000, p. 2). Research surrounding leisure and Parkinson's disease is limited, and the existing research surrounding the effects of leisure, other than physical activity, on the self-concept of people with Parkinson's disease is virtually nonexistent. Much of the past leisure research is focused on benefits derived from physical activity (Deane, Jones, Playford, Ben-Shlomo & Clarke, 2001; Eldar & Marincek, 2000). Vernon & Stern (1988) reported "improved function and, perhaps more important, an enhanced sense of well-being" (p. 110) as an outcome of physical therapy. Several studies have shown that regular physical activity can help reduce changes in motor functioning, muscle strength, ambulation and quality of life (Reuter, Engelhardt, Stecker, & Baas, 1999; Scandalis, Bosak, Berliner, Helman, & Wells, 2001). Hagestuen, Wichmann & Johnson (2003) suggest "a well-planned activity program should balance both movement and relaxation in the daily routine" (p. 546). Baatile, Langbein, Weaver, Maloney & Jost (2000) conducted a study to examine the effects of an eight-week pole-striding exercise program on the quality of life of people with Parkinson's disease. The authors found the program "had a significant effect on the exercise tolerance of individuals with PD" (p. 533) as well as positive improvements in perceived abilities in cognition, motor function, and activities of daily living. Moreover, 50% of the study's participants' scores increased on

measures of emotional well-being, mobility, activities of daily living, perceived stigma, perceived social support, cognition, communication and bodily discomfort.

The terms leisure, recreation, sport and play are often used, erroneously interchangeably. Distinguishing leisure from recreation, play and sport is particularly important for this study. Although all four terms are related conceptually, there are distinctions that need to be made. The terms leisure, recreation, sport and play are often defined by their components, for example, sports are contested, have accepted rules, and usually involve physical activity. It is also noteworthy to look at what is not included as a component of sport, “they [sports] exclude mental contests or more spontaneous ‘new games’ that are more cooperative than competitive” (Kelly & Frysinger, 2000, p. 216). Furthermore, Kelly & Frysinger (2000) point out themes consistent to sport. They are physically active, require a degree of regularity and form, and have competitive formats and outcomes. Sport includes a degree of measurement either by external judging or by competitive scoring. Kelly & Frysinger (2000) provide an inclusive definition; “sport is organized activity in which physical effort is related to that of others in some relative measurement of outcomes with accepted regularities and forms” (p. 216).

Play, unlike most other human endeavours, is universal to all. Kraus (1990) defines play:

Play may be defined as a form of human or animal behaviour, self-motivated and carried on for intrinsic purposes. It is generally pleasurable, and is often marked by elements of competition, exploration, and problem solving, and mimicry or role-taking. It may appear both in leisure and in work, and may be marked either by

freedom and lack of structure, or by a set of rules and prescribed actions (p. 41).

Several components of this definition stand out as obvious differences from sport.

Specifically the elements of exploration, problem solving and role-taking, which are all used unconsciously as socializing forces. That is to say, play “transmits values, customs, traditions and societal norms” (Edginton, Jordan, DeGraaf & Edginton, 1995, p. 43).

Traditionally play has been viewed as an unimportant activity that is reserved for children however, adults also play. As Edginton et al. (1995) point out, adults attach rules, boundaries and limitations on play. A result adult play is identified as recreation, leisure or sport.

Recreation has roots in Latin, *recreation*, means “to refresh” and *recreate* means “to restore”. Kraus (1990) defines recreation as an activity that is engaged in during one’s free time, is pleasurable, and which has socially redeeming qualities. An in depth examination of Kraus’ (1984, 1990) analysis of recreation yields the six elements that are common to most definitions of recreation:

1. Recreation is widely regarded as an activity in contrast to sheer idleness or complete rest.
2. Recreation may include an extremely wide range of activities. Activities may be engaged in briefly or in a sustained way, for single episodes or throughout one’s lifetime.
3. Recreation is voluntary and does not occur because of outside pressures, compulsory or obligatory.

4. Recreation activities are socially redeeming, wholesome, and contribute to the development of society.
5. Recreation has the potential for many desirable outcomes-fun is a steadfast goal of recreation, yet not its purpose (Haun 1965).
6. Recreation takes place during one's free time, although it is not so much the activity that one pursues, but rather the reason for engaging in it.

This analysis of recreation shows that recreation can be an array of activities that are engaged in voluntarily and have a number of desirable outcomes. A similarity to play is found in the fourth point, that is, recreation contributes to wholesome human development. Another important characteristic is that recreation takes place in one's free time.

Leisure is a difficult construct to define and is most often presented in the literature in terms of its characteristics rather than pure definition. In terms of time, leisure can be defined as time spent free of obligation and necessity. It is a time where we are in charge of our respective destiny. During true leisure, there are no outside factors or forces that determine our course of action. It is a time where we are free of our obligation to society concerning such things as work, family, and religion. In addition, this time is free from society's expectations of us as parts of a larger entity. Despite its many advantages, this definition is somewhat vague as it does not specifically address different types of leisure or describe to what extent one is free from social obligation. Since defining leisure as a function of time is so vague, this paper will move on to explaining leisure through action. Leisure can also be interpreted as a specific behaviour, resulting in relaxation and rejuvenation of the individual. When observed in this fashion,

leisure is based on conventional wisdom about what the majority of people would list as activities that meet the above requirements. Since different people like different things, leisure must be defined differently. Finally, leisure can be defined as a state of mind. This idea originated with Aristotle, eventually growing into what it is today. It deals with leisure as a form a self-expression, self-exploration and self-improvement. Leisure can be seen as people's greatest possession because it is essential for self-development and it forces people to step back from the constant struggles of daily life in order to see what is really important in life. While each of these views has flaws when studied alone, a combination of these views yields the best definition. Moreover, leisure as a phenomenon can be distinguished through objective and subjective observations as Mannell & Kleiber (1997) argue. The objective characteristics of leisure are the concrete aspects as it relates to activities, settings and time, whereas the subjective definitions maintain that "leisure is associated with the occurrence of certain types of mental states, perceptions, meanings, needs satisfied, and/or experiences" (p. 54).

To compound difficulties in defining leisure the vantage point of the researcher also plays a role. The researcher can choose to study leisure as either a subjective or an objective phenomenon as well as from an internal perspective or from an external perspective. From the external vantage point, the researcher defines when leisure has occurred based on some predetermined criterion. The internal vantage points allow the participant to define when leisure has taken place either through questionnaire or through assessment of the mental processes associated with leisure. Mannell & Kleiber (1997) use an illustration (see Table 3) to better convey the difficulty in defining leisure. For the purposes of this study, there will be a combination of viewpoints adopted. The activities

that will be used will be based on participant assessment therefore, the Internal/Objective standpoint will be used. The time and setting will be combinations of the internal and external vantage points because as there will a number of people involved and since each individual cannot dictate time and location, some compromises will have to be made. The subjective phenomena has to be internal; situations based on client needs, wants and desires will be facilitated however, whether or not leisure takes place is on an individual level and cannot be directly observed. Neither leisure nor change in self-concept can be directly observed therefore, whether leisure has taken place will be based on the results of analysis of the SDQ and focused interviews. As such, linking leisure and self-concept theoretically is important in order to demonstrate whether leisure experience(s) can have positive effects on the self-concept. Using the Shavelson et al. (1976) model of self-concept, we can see the potential leisure has to impact the domains that form the global self-concept. As discussed above, the benefits of leisure are numerous and the human psyche is not excluded; "leisure can provide both the context and experiences necessary to improve psychological and emotional well-being. Leisure can be an important mediator in improving self-definitions and understanding" (Stumbo & Peterson, 2000, p. 2). Activities engaged in for their own sake, or leisure activities provide an opportunity for self-actualization. Maslow (1968) observed that self-actualization is a resultant of "peak experiences" or moments of an individual's "greatest maturity, individuation, fulfillment- in a word, [one's] healthiest moments" (p. 97). In short, an individual participating in a freely chosen activity for individual reasons can produce psychological benefits. Since the activity being pursued is viewed as self driven the possibility for self-actualization exists; "leisure offers unique conditions for self-actualization that more

constrained contexts do not, particularly it allows for an individual to broaden his or her experience while involved in culture-affirming practices...involvement in an activity must be deep, sustained, and disciplined to contribute to an emerging sense of self” (Csikszentmihalyi & Klieber, 1991, p. 94).

Table 3: Research approaches to defining leisure’

Types of Phenomena	Definitional Vantage Point	
	External	Internal
Objective	Activity, setting or time period is defined by the <i>researcher</i> as leisure or nonleisure	Activity, setting or time period is defined by the <i>participant</i> as leisure or nonleisure
Subjective	Experience, satisfaction or meaning associated with involvement is defined by <i>researcher</i> as leisure or nonleisure	Experience, satisfaction or meaning associated with involvement is defined by <i>participant</i> as leisure or nonleisure

Note. From *A Social Psychology of Leisure* by R. Mannell and D. Kleiber, 1997. State College, PA: Venture Publishing, Inc.

A study by Rhodewalt and Agustsdottir (1986) examined self-concept change by manipulating freedom of choice, the researchers found that behaviour of the ‘no-choice’ subjects reinforced existing self-images, but only those subjects who perceived freedom of choice incorporated new identity images into their self-concepts. Rhodewalt and Agustsdottir (1986) concluded that perceived freedom of choice “best accounts for elevations in self-esteem after self-enhancing behaviour” (Rhodewalt & Agustsdottir, 1986, p. 47). Furthermore, Haggard and Williams (1992) demonstrated the impact leisure can have on self-perceptions and self-affirmations. Haggard and Williams (1992)

linked freedom of choice, which is an integral component of leisure, with self-perceptions saying that “leisure activities, primarily because they are unconstrained, may be particularly good vehicles for self-affirmations...people probably create given identities for themselves, partly by selecting themselves into given recreation activities which serve to bolster and/or furnish the identity images associated with that activity” (p. 112).

Intrinsic motivation is yet another concept directly related to leisure that can have an impact on self-concept; “intrinsic motivation occurs when the individual is aware of potential benefits that may be derived from participation in various activities” (Dattilo, 1999, p. 21). Smith & Mackie (1995) found that intrinsically motivated behaviours have an important impact on the self-concept.

The leisure experience provides an opportunity to explore thoughts and feelings about ones self, in this respect leisure can influence the self-concept. Csikszentmihalyi (1991) reported that improved self-concept results from a deeper understanding of self while Dattilo (1999) contends that “activities that facilitate the leisure experience have the potential to allow individuals the freedom to explore their thoughts and feelings about themselves” (Dattilo, 1999, p. 21). Thus, an association between leisure and improvement in self-concept can be conceived. Deci (1975) identified two desires that intrinsically motivate individuals to participation in leisure activities: the development of competence and to become self-determined.

Intrinsically motivated leisure experiences “stem from an individual’s desire to derive feelings of competence and self-determination” (Dattillo, 1999, p. 24). As illustrated in Figure 3 (from Dattillo, 1999, p. 24) perceived competence and self-determination contribute to an individual’s self-concept and intrinsic motivation. The

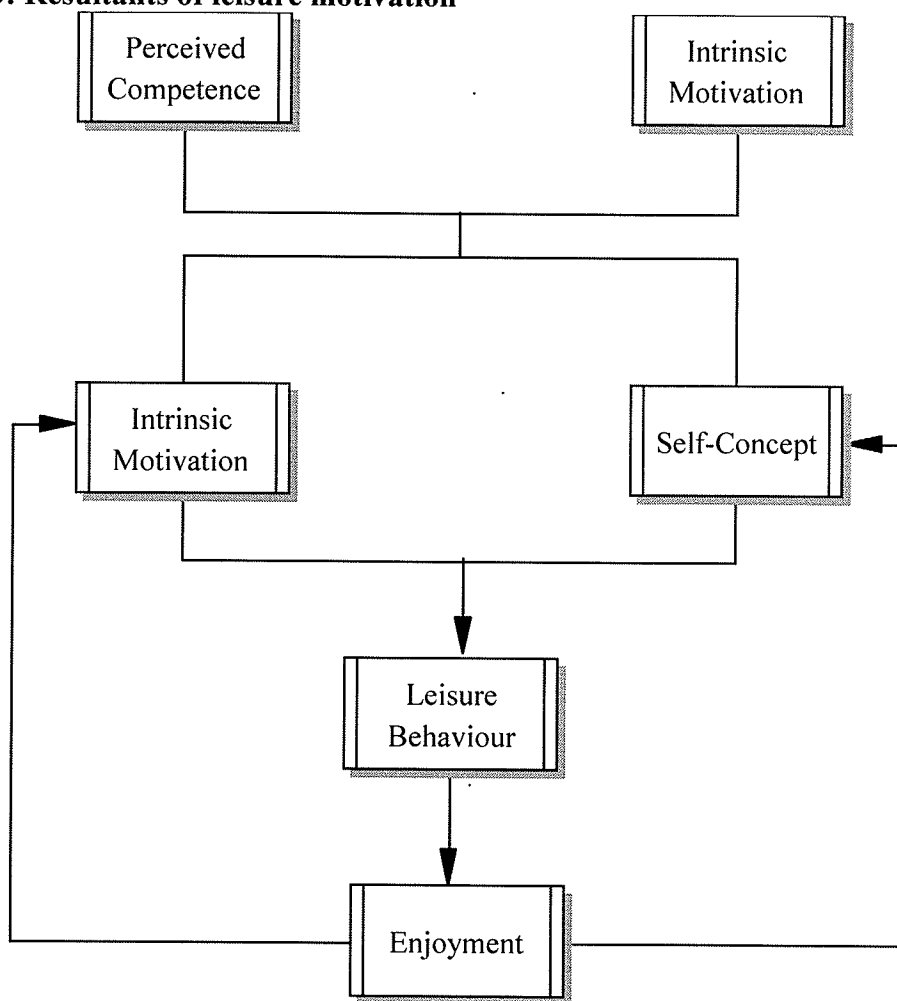
process is cyclical, intrinsic motivation, in turn, leads to more feelings of competence and self-determination. Now connections are forming between concepts, perceived competence and self-determination leading to intrinsic motivation, which is directly related to self-concept.

Using the Dattilo (1999) model, when an individual experiences the enjoyment associated with leisure the individual will become increasingly intrinsically motivated to participate and therefore, their self-concept will be enhanced. Where self-determination refers to an individual feeling able to decide what, where and when leisure takes place for the individual. Self-determination is similar to the subjective internal perspective of leisure discussed earlier. Self-determination “allows people to expand their sense of freedom and control over their social environments even in the face of potentially controlling factors” (Mannell & Kleiber, 1997, p. 141). Similarly, perceived competence refers to an individual’s cognitive perception of his/her own ability to participate in leisure, which is closely related to self-concept. Harter (1988) refers to perceived competence as one multidimensional component of self-concept. Furthermore, Harter (1988) associates perceived competence with general self-worth and positive motivation.

In typical development, according to Weiss, Diamond, Demark & Lovald (2003), a positive self-concept has been linked to emotional stability and positive adjustment, to independence and resiliency to stress, and inversely related to mental illness (such as depression, anxiety, etc.). Conversely, a negative view of one’s self has been associated with anger, depression, and low motivation. People with disabilities are particularly susceptible to the development of a negative self-concept (Evans & Lee, 1998) because “perceived intellectual inadequacy, repeated failures in academic and social domains, and

prolonged stigmatization often experienced by individuals with developmental disabilities are all risk factors for poor self-efficacy and low self-esteem” (Weiss et al., 2003, p. 283). The societal effect of disability is described in the social model of disability (Oliver, 1990).

Figure 3: Resultants of leisure motivation



Dattilo, J., (1999). *Leisure Education Program Planning: A systematic approach 2nd ed.* State College PA: Venture Publishing, Inc.

The foundations of the social model of disability are most often traced back to a proposal presented in 1976 by the Union of the Physically Impaired Against Segregation (UPIAS). The proposal by UPIAS was adopted by Disabled People’s International (DPI). Together

the UPIAS and DPI offered a two-element model involving 'impairment' and 'disability' to the World Health Organization as an alternative to existing classifications. The proposed classifications were:

Impairment: is the functional limitation within the individual caused by physical, mental or sensory impairment.

Disability: is the loss or limitation of opportunities to take part in the normal life of the community on an equal level with others due to physical and social barriers. (DPI, 1982; in Siminski, p.709; 2003)

The classifications offered by UPIAS and DPI separated the societal (disability) from the person (impairment). It also removed the responsibility for 'disability' from the individual and placed it on society. Oliver (1996, p.42) argues that impairment is simply an explanation of the physical body where as disability "is a consequence of the failure of social organization to take account of the differing needs of disabled people and remove the barriers they encounter" (Oliver, 1996; p.42). As such the social model of disability recognises that some people have impairments which affect how they function physically or mentally. But those people are disabled by the barriers that exist in a society that does not take account of their needs. These barriers may be in the physical, organisational or personal aspects of society - for instance, stairs without lifts, information not available in large print, or people's negative attitudes. The social model sees people with impairments as having the same wants, needs and aspirations as people without impairments. The social model of disability holds that people with impairments should enjoy the same freedoms and choices as those who do not have impairments and be allowed equal responsibility in determining their life choices.

Using the Shavelson et al. (1976) hierarchal model of self-concept, it has been discussed how Parkinson's disease can negatively influence every facet of self-concept. Using the Sparnger & Schwarts (2000) "Quality of life reponse shift" (p. 12) a change may take place where Parkinson's disease acts as a catalyst altering an individual's internal standards of perceived health related quality of life. Where the self-concept is an individually unique entity and as such has differing impacts. As addressed by Shavelson et al. (1976) self-concept is formed in early life through interactions with the environment, where the environment is social structure in which the individual exists. Furthermore, the uniqueness of the time and space in which an individual was raised results in "a different belief system from which to view the world" (Hattie, 1992; p.98). Although one individual may hold certain beliefs about him/herself, a second individual may hold similar beliefs regarding the first; however, they would not be identical. "There are commonalities across individuals and these refer to the structure and process of self-concept" (p.98). It would be reasonable to expect commonalities between individuals raised in similar environment or raised under similar socioeconomic status. An individual's perspective of self relates directly to the group on which a comparison is being formed. As such using the Social Model of Disability it can be argued that the experience of disability for people with Parkinson's disease and the subsequent negative impact on self-concept would be a result of societal interactions rather than the progression of the disease. For instance, as described above there are several physical symptoms associated with Parkinson's disease that often lead to stigmatization and embarrassment. The social model of disability would hold that the stigmatization/embarrassment is not the responsibility of the individual experiencing it

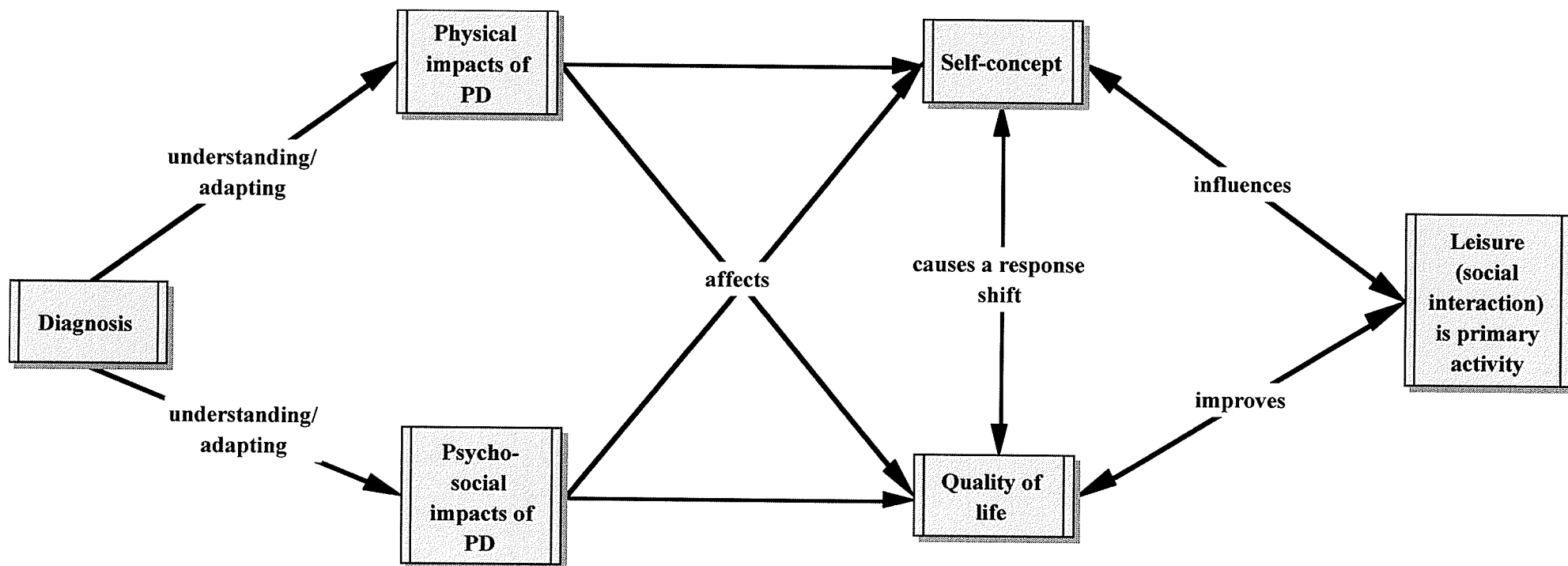
rather it is society that causes people with Parkinson's disease to feel stigmatized. As the Social Model of Disability identifies the cause of disability in the economic, political and cultural barriers encounter by people with impairments (Oliver, 1990).

In summary using the Shavelson et al. (1976) hierarchal model of self-concept (Figure 1), Parkinson's disease can negatively influence every facet of self-concept. Consequently, a shift in health related quality of lifetakes place where Parkinson's disease acts as a catalyst altering an individual's internal standards of perceived quality of life. Keeping with the Shavelson et al. (1976) model of self-concept, research has shown (Stumbo & Peterson, 2000; Csikszentmihalyi & Klieber, 1991; Rhodewalt & Augustdottir, 1986; Haggard & Williams, 1992; Smith & Mackie, 1995; Csikszentmihalyi, 1991) that leisure can positively influence self-concept and overall quality of life.

The goal of this research is to apply existing knowledge of self-concept, Parkinson's disease and leisure through a therapeutic recreation intervention to determine if positive changes in self-concept may be elicited. The spectrum of symptoms and consequences of the symptoms have the potential to negatively impact self-concept and overall quality of life. Likewise the benefits that can be derived from participation in activity for internal reasons has the potential to positively impact self-concept and overall quality of life. The implications of this project are two-fold. The primary beneficiaries are the intervention participants, as they will be given the opportunity to participate in an activity that is self-determined and intrinsically motivated. Through their participation, the potential to increase self-concept and consequently health-related quality of life, as well as to experience numerous benefits of leisure, will be provided. There are also implications

for therapeutic recreation researchers and practitioners as this project has the potential to systematically demonstrate the efficacy of therapeutic recreation.

Figure 4: Possible relationships of variables affecting people with Parkinson's disease and leisure participation



METHOD

Pilot Study

During the winter term of 2004, a pilot study was conducted to examine if qualitative interviews were an effective tool in highlighting the requisite information needed to develop a therapeutic recreation intervention. As such, five qualitative interviews with people with Parkinson's disease were conducted. The interviews were intended to address issues related to determining if the interview process would yield information and determine if any trends or themes may be present. More specifically, the aim was to determine if an interview process could be employed to bring into focus the individuals' interests and goals related to leisure. The research project received ethical approval from the Education/Nursing Research Ethics Board (Protocol #E2004:031). The individuals were recruited through Parkinson's Society Manitoba on a volunteer basis through information posters posted at various Parkinson's Society groups and a posting on the internet. Although the sample size was relatively small, some clear trends emerged (see Table 4).

All the data collected through the interviews has been useful but two of the trends were significant in providing direction to the current research project. The most apparent piece of information from the interviews was the importance of social activities in the lives of the participants (see Table 4). All five of the participants discussed several social activities currently pursued that were initiated pre-diagnosis of Parkinson's disease. The types of social groups varied from formal organizations such as religious groups and the Masons to informal groups of peers who share similar interests, backgrounds or hobbies. The motivation for participation also varied but was most often a combination of

enjoyment and mental health, physical health or achievement. The overwhelming evidence for social situations lead to the conclusion that social interaction is not secondary to the activity, social interaction is the primary activity. A second trend that emerged from the pilot study referred to the types of activities pursued in the past but had since been dropped. In all instances, physical activities in the form of recreation and sport were the first activities dropped. Although many physical activities in the form of leisure such as carpentry, dancing, and travel were maintained.

The qualitative interview process proved itself to be an invaluable method of data collection. The participants were all very enthusiastic about the interviews, and the interviews yielded some very rich data. The results of the pilot study demonstrated the effectiveness of qualitative interview process and has allowed for the progression of this inquiry.

Research Question

How can participation in a therapeutic recreation intervention increase the global self-concept of community dwelling people with Parkinson's disease in Winnipeg Manitoba?

Hypothesis

Participation in a therapeutic recreation intervention will increase global self-concept.

Participants

Participants were recruited through Parkinson's Society Manitoba on a volunteer basis. A letter describing the research and requesting assistance in recruiting was sent to the Executive Director, who placed an advertisement for information sessions was placed in the Manitoba Parkinson's Society newsletter.

A total of 21 people agreed to participate in the study, one member of the reference group past away during the study including four of the five people involved in the pilot project, although they were not necessarily in the intervention group.

Table 4: Leisure related themes from five interviews with people with Parkinson's disease

Themes	Sub-Themes
Continuity in Current Activities	Social/group With spouse only Individual New/recent Continued'
Motivation for Participation	Social/Fun Mental Health Physical Health Achievement
"I've never been a sport person" Dropped Activities	Social/group Individual
Reasons for dropped activities	Loss of interest Parkinson's related/loss of ability
Feelings towards PD affecting leisure	Sense of loss No sense of loss (adaptation)
Desired activities-resurrecting the past	Social/group Individual
Reasons for participation in study	Leisure/recreation is important Helping

The 21 participants were divided into three groups: (a) The 'intervention' group was made up of those individuals who made the decision to participate in the treatment condition therapeutic recreation intervention, (b) the 'non-intervention' group was made of those individuals who expressed an interest in participating in *an intervention* but not at this time. Participants in the non-intervention group were told they would have the

option in participating in a second intervention to be offered after the treatment condition intervention, and (c) the ‘reference’ group consisted with participants who did not want to participate in the intervention at all. Table 5 describes the demographics of the participants.

Table 5: Demographic Descriptors

Demographics		Group		
		Intervention	Non-Intervention	Reference
	M	6	4	6
N	F	2	2	1
Mean Age (yrs)		64.94	71.46	65.24
Mean Education (yrs)		14.38	13.17	13.33
Length of Diagnosis (yrs)		4.78	5.83	5.42

Design

The research takes into account the identified issues in defining the construct of self-concept and measuring self-concept in two ways. The first measure, taken to address the definitional concerns, is to adopt one theoretical framework of self-concept, namely the Shavelson, et al. (1976). The Shavelson et al. (1976) has been chosen as a framework because it “has undergone extensive construct validation... [and] construct validation of the Shavelson model has been approached from different perspectives” (Byrne, 1996, p. 23). The second measure, taken to address concerns in measurement of self-concept, is the use of an assessment tool based on the Shavelson et al. (1976) model. The tool being used in this study is *Self Description Questionnaire III* (Marsh, 1992) (see Appendix I).

This tool “comprises a multidimensional structure that is firmly rooted in the Shavelson et al. (1976) theoretical model of self-concept” (Byrne, 1996, p. 197). Therefore, there is shared foundation in definition and measurement of self-concept, as such it becomes more clear that the construct defined as self-concept is the construct being measured.

A quasi/mixed-experimental design was applied to this study and three types of data were examined. Demographic descriptors of the participants including age, gender, education and length of diagnosis were collected (see Table 5). Assessment of self-concept via *The Self Description Questionnaire III* (Marsh, 1992) was conducted at several intervals, and the statistical analysis being employed is described below. Finally, focused interviews were conducted with all the participants pre-intervention as well as with the experimental group post-intervention (see Table 6). Due to the quasi/mixed-experimental design nature of this study, the participants were not randomly assigned to treatment or experimental groups (Jackson, 2003, p. 86). This type of design is known as “the non-equivalent control group design” (Whitley, 2002, p. 307) where the experiment and control groups are not considered equal because participants were not randomly assigned to each condition. Non-random assignment to conditions raises two concerns: (a) the problem of pre-existing differences and (b) the problem of biased selection. Pre-existing differences can occur as a result of non-random selection where the intervention group differs from the non-intervention and reference groups with respect to the dependant variable. The problem of biased selection refers to personal characteristics of the intervention group differing from those of the no-intervention and reference groups. These threats to validity have been reduced by having two control groups, one group who expressed an interest in the intervention and did not receive it (non-intervention) and a second group who did not request the intervention at all (reference).

Instruments

The present study did yield three distinct types of information and consequently required a variety of analytical approaches. The information collected consists of:

1. Demographic descriptors of the participants which include age, gender, education, length of diagnosis and attendance.
2. All the participants were assessed on a measure of self-concept using the *Self Description Questionnaire III* (SDQ) (Marsh, 1992) (see Appendix I). The SDQ, as such, required a statistical analysis. This study had three treatment conditions (intervention, non-intervention and reference groups). Differences found through SDQ reflect individual difference as well as a person's state, environmental factors and response willingness. The SDQ was not be used in the traditional sense as a comparison between participants. Rather the focus was the differences between pre-intervention and post-intervention scores of individuals rather than groups. Finding individual differences was accomplished by calculating the total self-raw score then converting the raw score into normative scores.
3. Qualitative data, in the form of focused interviews, were also collected pre and post-intervention and was examined via key theme approach (Goetz & LeCompte, 1984) (see Appendix II). The process of analysis was characterized by categorization of data into main themes, identifying differences, similarities and links between sources of data (triangulation) and making comparisons between groups.

Methods

The aims and proposed methodology of the study were submitted to the Education/Nursing Research Ethics Board and received approval on September 13th 2004 (protocol #E2004:081) (see Appendix III).

Participants were recruited through the Manitoba Parkinson's Disease Society. A letter describing the research and a recruitment poster was sent to the executive of director of the Manitoba Parkinson's Disease Society. The recruitment poster (Appendix IV) contained a brief description of the research as well as the dates and times for four information meetings scheduled at the Investors Group Athletic Center at the University of Manitoba. A copy of the recruitment poster advertising the information sessions was published in the September Parkinson's Society newsletter. At the information meetings the research was explained to potential participants. The individuals in attendance were not asked to make a commitment at the information sessions but rather they were asked to leave their name and phone number if they were interested in participating in any of the three groups.

As a result of the published recruitment poster the Manitoba Parkinson's Society received several phone calls regarding the research and subsequently invited me to a support group meeting and an exercise group to present my research proposal and answer questions regarding the study. At both the support and exercise groups a description of the research was provided any questions individuals had were answered. Again, people were not asked to commit to the research at either of the presentations, they were asked to leave their contact information if they were interested.

After the recruitment procedure had been completed, focused interviews were conducted with the all the participants, pre-intervention to determine if differences existed between those who would like to participate and those who would not. At this initial interview, the research was discussed and participants were asked to choose which group they would like to take part in. The interviews were audio taped and transcribed. Data from the SDQ was analyzed using a Kruskal-Wallis one-way analysis of variance

and the data from the initial interview was analyzed with respect to themes, to determine if relationships existed between Parkinson's disease and self-concept, and to determine the effectiveness of the intervention.

Individual focused interviews were also conducted with the intervention group post-intervention to provide personal perspectives on the intervention, to provide qualitative information about their self-concept and to determine if their perspectives' had changed from the pre-intervention interview (see Table 6).

Table 6: Project Design

Group	Component of intervention						
	SDQ			Intervention	Interview		Post-intervention
	Pre	During	Post		Pre	Post	
Intervention	✓	✓	✓	Yes	✓	✓	
Non-Intervention	✓		✓	No	✓		✓
Reference	✓		✓	No	✓		

Marsh's (1992) *Self Description Questionnaire III* (SDQ) was the assessment tool used for measuring self-concept. The SDQ III is designed to measure multiple dimensions of self-concept in adults; "it comprises a multidimensional structure that is firmly rooted in the Shavelson et al. (1976) theoretical model of self-concept" (Byrne, 1996, p. 197). The SDQ is a 136-item self-report inventory that measures self-concept in eight non-academic areas: physical abilities, physical appearance, same sex relations, opposite sex relations, parental relations, spiritual values/religion, emotional stability, honesty/trustworthiness; four academic areas: verbal, mathematics, problem solving, general-academic; and one that measures global self-concept (total self and general self).

According to Byrne (1996):

The SDQ-III is currently the most validated self-concept measure available for use with adults. Following as that related to the other SDQ scales, this past decade has seen the SDQ-III undergo rigorously extensive testing to establish its psychometric soundness as a measure of self-concept. Thus, I again conclude that researchers, clinicians, counselors, and others interested in the measurement of self-concept can feel confident in the validity of interpretations based on responses to the multidimensionally-sensitive SDQ-III items. (p. 204)

Marsh (1992) reported internal consistency reliability coefficients ranging from .76 (Honesty/Trustworthiness) to .95(Spiritual Values/Religion). Over the 13 subscales, the mean alpha was reported as .90 with Honesty/Trustworthiness being the only subscale less than .84. The SDQ allows for the calculation of subscale raw scores and total scale raw score (non-academic, academic, and total self-concept).

Participants were interviewed using a focused interview strategy (see Appendix II) asking about the impact Parkinson's disease had in their life as well as if they perceived themselves differently as a result of Parkinson's disease. Leisure preferences, attitudes and interests were also included in the focused interview. The focused interview strategy included four characteristics as outlined by Frankort-Nachmias & Nachmias (1996):

1. It takes place with respondents known to have been involved in a particular experience.
2. It refers to situations that have been analyzed prior to interview;

3. It proceeds on the basis of an interview guide specifying topics related to the research hypothesis.
4. It is focused on the subjects' experiences regarding the situations under study.

The focused interviews involved data collection by setting up a situation that allowed the participant the time and scope to talk about their opinions on a particular subject.

The objective of the focused interview was employed to understand the participants' point of view rather than make generalizations about behavior. The strategy used open-ended questions, some suggested by the researcher ("Tell me about...") and some arose naturally during the interview ("You said a moment ago...can you tell me more?"). The researcher attempted to build a rapport with the respondent and the interview was like a conversation.

In the focused interview strategy, the questions were prepared by the researcher (see Appendix II), however the use of probes occurred in order to "motivate the respondent to elaborate or clarify an answer or to explain the reasons behind an answer, and they helped focus the conversation on the specific topic of the interview" (Frankfort-Nachmias & Nachmias, 1996, p. 240). The wording of questions was the same for all the participants, however the wording of the probes were dictated by the situation.

Although the interaction was structured and the major aspects of the study were determined by the researchers, this method was chosen because the participants were "given considerable liberty in expressing their definition of a situation that is present to them" (Frankfort-Nachmias & Nachmias, 1996, p. 234). For instance, the participants were asked to describe how Parkinson's disease had had an impact on their life. The

wording of this question allowed the individual to define 'impact' as they saw fit as well as to discuss those impacts on many different aspects.

Individuals' who self-identified as wanting to participate in the first intervention were designated as the "intervention group". The intervention group received a therapeutic recreation intervention designed to improve self-concept by allowing the participants to determine the specific activity. The intervention had three component parts: leisure education, planning/goal-setting and leisure participation. Leisure education is a process "through which people go in order to become self-determining or independent in their leisure" (Howe, 1989, p. 207). This process included developing knowledge of the concept of leisure, skills required for desired pursuits, and self-awareness in relation to leisure. The goal of leisure education is to provide participants with "enough knowledge and skills to make an informed and independent choice for his or her future leisure participation" (Stumbo & Peterson, 2000, p. 17). The second component is planning/goal setting where the participants employed acquired knowledge from leisure education to (a) provide input into what type of program was offered (i.e. the specific activity, location, and time) and (b) set specific goals for themselves in relation to what program has been chosen. Austin (1999) outlined the four step procedure recreation therapists' typically use in a planning phase: (a) setting priorities following examination of the client's needs, (b) formulating goals or general objectives, (c) determining strategies or actions to meet the goals and, (d) selecting methods to assess progress made toward goals. For the purposes of this project, the participants determined what their priorities were with respect to leisure, determined what goals they would like to set for themselves and how they could meet their goals through participation in the intervention. Assessment of progress made toward the goal was done during the post-

intervention interview. This is consistent with a person-centered approach where the individual determines the direction of the intervention (Stumbo & Peterson, 2000). The activities that was based on participant assessment therefore, the Internal/Objective standpoint will be used. The time and setting were combinations of the internal and external vantage points because as there will a number of people involved and since each individual cannot dictate time and location, some compromises will have to be made. The subjective phenomena has to be internal; situations based on client needs, wants and desires will be facilitated however, whether or not leisure takes place is on an individual level and cannot be directly observed.

The final component was recreation participation “structured activities that allow the participant to practice newly acquired skills and/or experience enjoyment and self-expression” (p. 17). During this component, the decisions made during the planning phase were implemented. Furthermore, the opportunity for the participants to meet their predetermined goals was provided. Self-concept was measured using the *Self Description Questionnaire III* (Marsh, 1992) at the end of each of the three components of the intervention.

The study design was explained to each participant at the time of the initial interview. Each participant was asked which group they would prefer to take part and subsequently became a part of their group of choice. The intervention group expressed a desire to begin the intervention immediately, the non-intervention asked to begin the intervention but chose to wait until after the intervention group finished, and the reference group chose not to participate in the intervention at all. There was a twelve week period between the initial interview and the follow-up interview for the intervention

group. The following analysis will consist of a model of self-concept as developed by the participants as well as the several charts describing the model's component parts.

Facilities/Equipment

Three different facilities were used in this study. The conference room on the second floor of the Investors Group Athletic Center at the University of Manitoba was used to hold information meeting during recruitment. A board room in the condominium building of one of the participants in the intervention group was used for the leisure education and planning/goal setting phases of the study. The location was volunteered by the participant and proved to be convenient for the other participants. During the recreation participation phase a larger area was needed. The conference room at the Deer Lodge treatment center was booked for those sessions.

For this study a Sony tape recorder/transcribing machine was used to tape the interviews and to transcribe the interviews. The interviews were recorded on standard audio cassettes. A large pad of paper, tripod, a television and a VCR were also used.

RESULTS

The participants in this study self selected what treatment group they wanted to take part in thus, the groups cannot be considered equal therefore a non-parametric test was need to analyze the results of the SDQ. The results of the SDQ were analyzed using the Kruskal-Wallis one-way analysis of variance. The Kruskal-Wallis one-way analysis of variance is “an alternative to a one-way ANOVA”(Breyfogle III, 2003; p. 518) for use with non-parametric data. The Kruskal-Wallis one-way analysis of variance requires one dependant variable and assumes “that independent random samples taken from different populations have a continuous distribution and shape” (p.518). The Kruskal-Wallis one-way analysis of variance by ranks test was used to determine whether the three or more independent groups are the same or different on a variable of interest.

A mean score for each of the scales, eight non-academic, four academic and global general self concept, was calculated. The result showed no significiant differences between groups ($p < .05$) pre-intervention. The mean scores were also collected during and after the intervention. The results showed no significiant differences in the intervention group pre/post-intervention ($p < .05$). The output of Kruskal-Wallis one-way analysis of variance is shown in Appendix IV.

The qualitative interviews were analyzed via the key theme approach using NUDIST N-Vivo software version 1.0. Each interview was entered into the software package where it was manually organized into themes. Each theme was naturally occurring in the data, that is, the themes reflect only what the participants said and nothing more. Themes are described in terms of a ‘domain’ of functioning, each domain

is further broken down into 'facets' or more specific areas of domains, and each 'facet' is described in terms of its situation specific components (Figure 5).

Qualitative Results

The qualitative results will be presented in terms of five sets of comparisons:

1. Intervention Group PRE and Intervention Group POST
2. Intervention Group PRE and Non-Intervention Group PRE and Reference Group Pre
3. Intervention Group PRE and Non-Intervention Group PRE
4. Intervention PRE and Reference Group PRE
5. Non-Intervention Group PRE and Reference Group PRE

Comparison of Intervention Group PRE and Intervention Group POST

The results of the self-concept inventory, as developed by the participants, will be presented. Also, each of the three groups were compared to one another and the intervention group was examined pre/post to determine the effects of the intervention. Table 7 illustrates that the effects of the intervention yielded the most interesting impact on the internal self. Specifically the academic self, self worth, self-determination and general self-perception had changed. The affected components related directly to the Shavelson et al. (1976) model of self-concept in that each of the affected areas could be linked to the middle hierarchy domains in the Shavelson et al. (1976) model of self-concept. The highlighted portions of Figure 6 show the differences found in the academic, emotional domains as well as in the overall general self-concept through changes in general self-perception. As such, the affected domains could also be linked to

perceived health related quality of lifethrough the Sprangers & Schwartz (2000)

“response shift” (Figure 7).

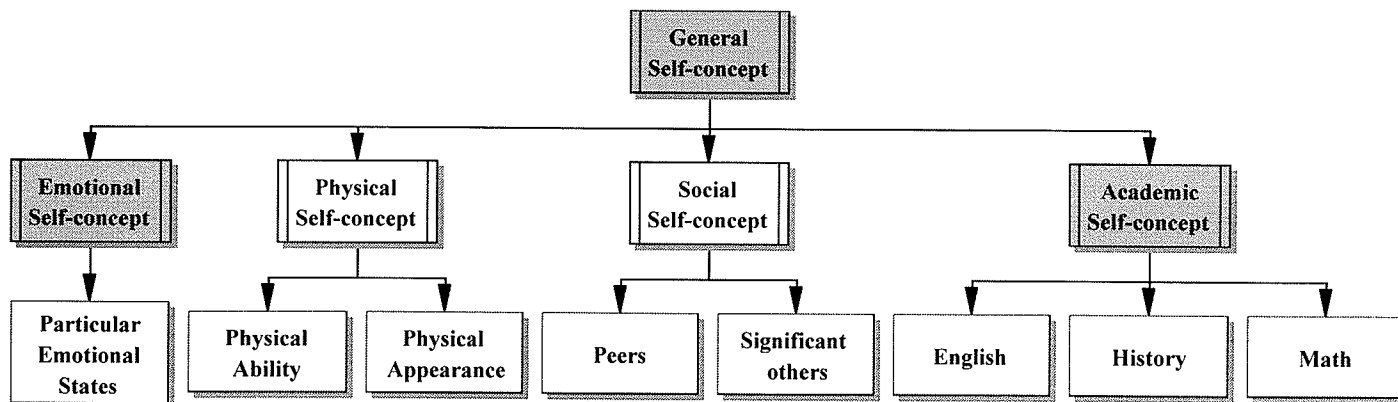
Table 7: Comparison of Intervention Group PRE & POST

Domain	Facets	No Change	Differences
Impacts	Internal	Social Spiritual	Academic Self-worth Self-determination General Self-Perception
	External	Day-to-day ADLs	Physical Freedom
Leisure	Challenge Themselves	Work	New Activities Continued Activities
	Motivation	Social Relaxation Challenged	Parkinson's disease
Control	Accommodation	Accepting when needed Dropped activities Medication	
	No Accommodation	Helplessness	Frustration Resistance Questions

The Sprangers & Schwartz “response shift” describes “a change in the meaning of one’s self-evaluation of a target construct as a result of (a) a change in the respondent’s internal standards of measurement; (b) a change in the respondent’s values; or (c) a redefinition of the target construct” (Sprangers & Schwartz, 2000; p. 12). Analysis of the

data indicated that a shift had taken place where the internal standards, values and conceptualizations of the participants were changed.

Figure 5: Shavelson Hierarchical model post-intervention



For example, pre-intervention there was no mention of academic aspects of Parkinson's disease, the knowledge of the disease and its progression were not relevant to the participants. Post-intervention the knowledge of Parkinson's provided participants with peace of mind, that is, knowledge reduced the degree of uncertain that accompanies Parkinson's disease. Consider this excerpt from an interview conducted post-intervention with Angie (not participant's real name).

Angie: "I wish things were shared more. Like this group that we have, I have just learned a lot of things from it, and I wish that everything would be shared. Like what happens in eight years or ten years, the percentage of how are people are affected with different things, like how it changes, I don't seem to know. Like they say things I don't understand at all at the meeting, especially about the drugs. I never know what drug I'm on"

Figure 6: Participant's self-concept

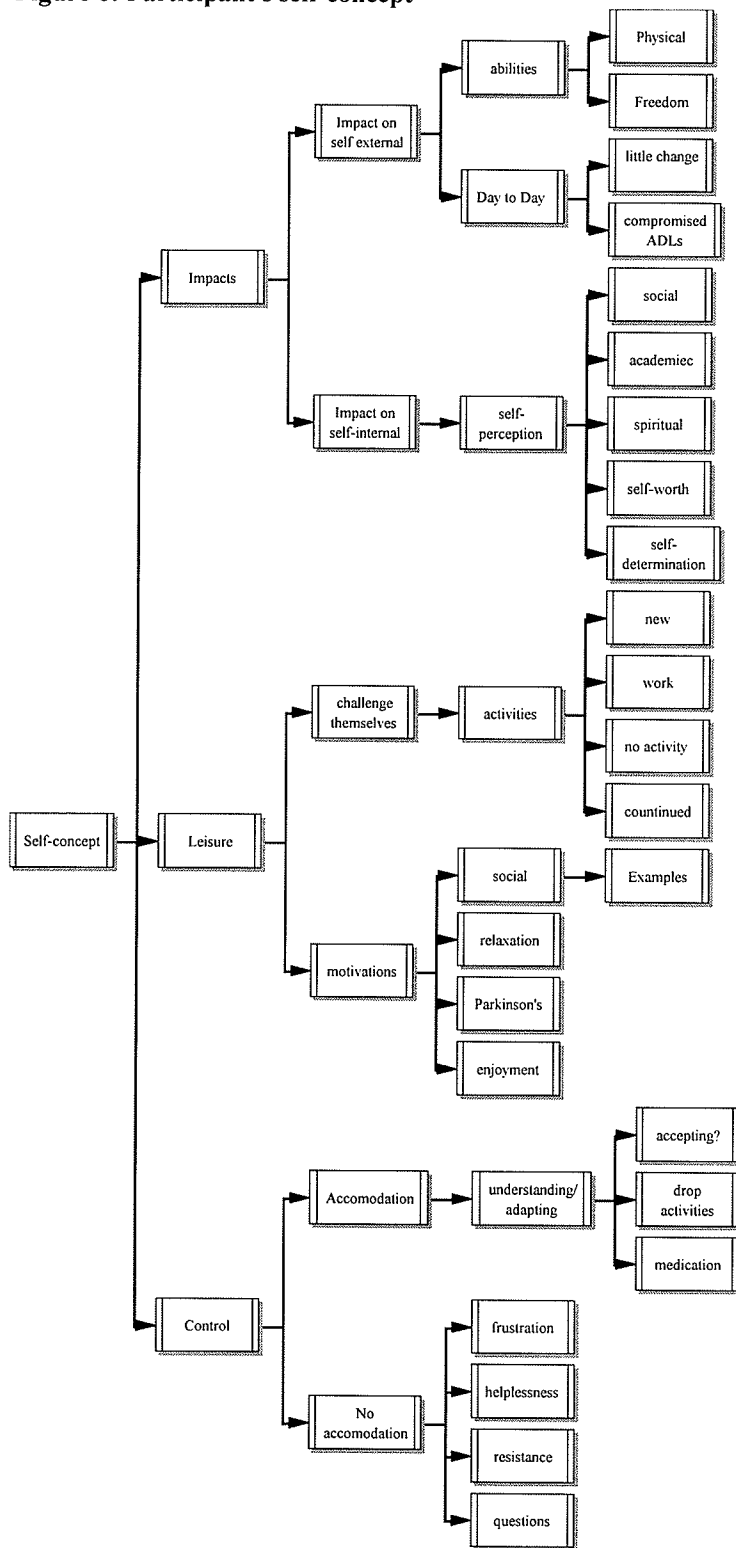
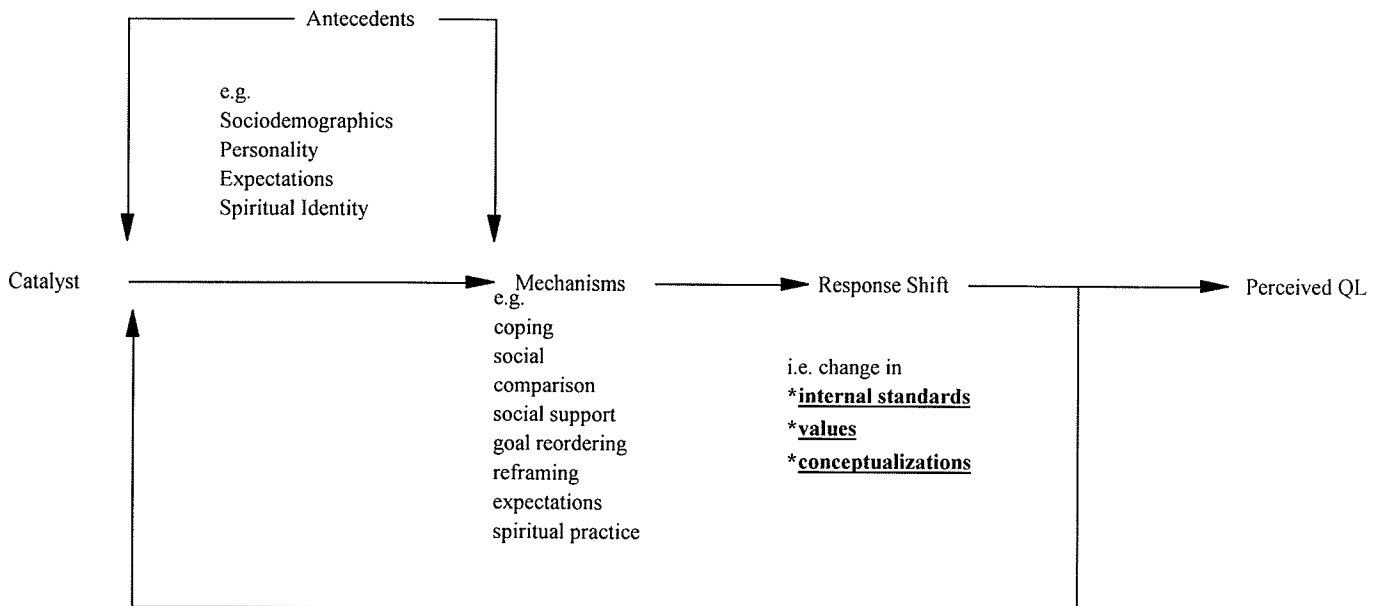


Figure 7: Resultant response shift

Spranger, M & Swartz, C. (2000). *Adaptation to Changing Health: Response shift in quality-of-life research*. Washington DC: American Psychological Association.

Table 7 illustrates the effects Parkinson's disease has had on the leisure functioning of the participants in this study. The effect of Parkinson's on the participants' work was not remarkable. The participants always had some form of motivation although the participants were not necessarily acting on the motivations pre-intervention (social, relaxation, challenge). Post-intervention the participants discussed engaging in new types of activities and taking on new roles in previously enjoyed activities. Throughout the study participants were motivated by Parkinson's disease to participate in some form of leisure. Pre-intervention Parkinson's disease motivated participants to engage in activities that were based on symptom management; post-intervention Parkinson's disease motivated participants to participate in activities based on developing social friendships and sharing information. Consider the following quotes, the first comes from a pre-intervention interview, the second from a post-intervention interview:

Jeff: "I've always been interested in research. I spent my career doing research. I'm interested in this study partly because it's research approach in terms of what its outcome might mean for other people with this disease. That's beneficial too. I'm interested in scientific literature about the disease, as I mentioned earlier before we recorded this conversation, I think that Parkinson's patients would benefit from delving into not only what is known about the problem but what's come about and what can be done to control it or mediate it, what possibly might be done to reverse it."

Ben: "We got together on the weekend. We phone each other, we share ideas. You figure when you got Parkinson's you are the only one who is down. Everybody else is up and you are down, but when you get a group of 12 congenial people you are not down anymore, you are just the same as everybody else. You have few little problems but that's okay. You are going to manage your life anyway."

The change in frustration, resistance, and questions represented a shift in focus for the participants. Pre-intervention the root of the frustration, resistance and questions were with the current functioning. During the post interview, the focus shifted to a more proactive view where the participants' experienced frustration, resistance and questions while trying to take control of their situation and their future. For example, pre-intervention the clients experienced frustration with coping with their lost abilities. Post-intervention the focus of the frustration was shifted from themselves to others, where the frustration is based on trying to navigate the way other people are treating them.

Ben: "So, I feel kind of odd. He means well, he is a very good friend. Walking across an icy street his wife will grab me by the arm. Instead of me helping her she is helping me. I know what's on her mind."

2. Intervention Group PRE and Non-Intervention Group PRE and Reference Group PRE

All three groups have been examined in order to determine what, if any, situation specific facets of self-concept were common between all groups. Table 8 describes

situation specific domains that were common to all three groups as well as those domains that were different between all three groups. The situation specific aspects' that these two groups have in common include social and self-determination. All the participants in the study identified a desire to maintain social relationships. These results are consistent with the Shavelson et al. (1976) hierarchical model of self-concept as well as the Dattilo (1999) resultant model of leisure motivation.

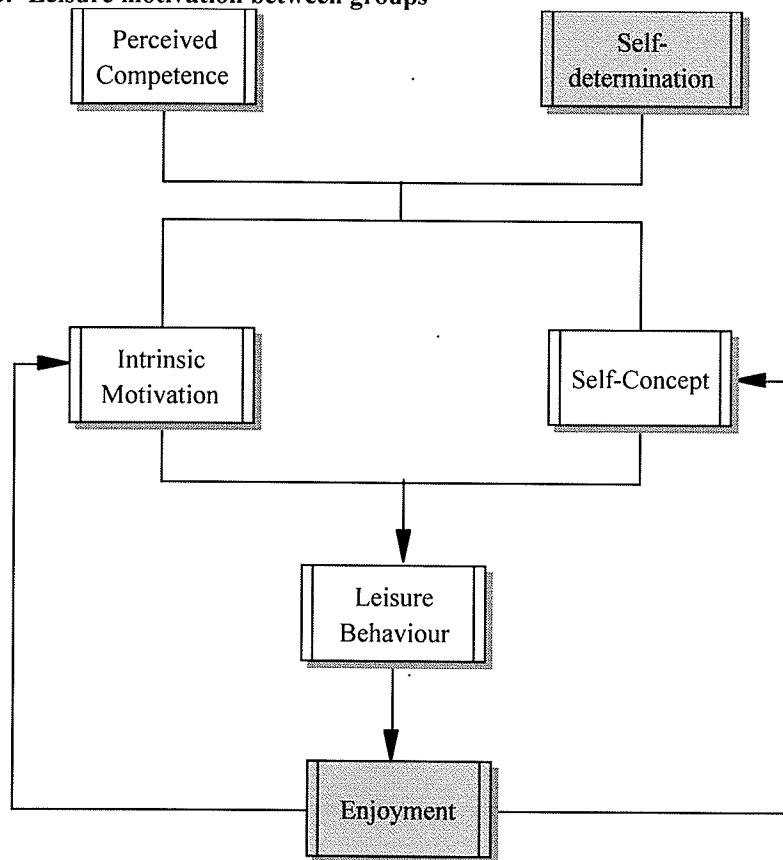
Table 8: Comparisons between all groups

Intervention & Non-Intervention Group PRE & Reference Group PRE			
Domain	Facets	Common to all groups	Different between groups
Impacts	Internal	Self-determination Social	Academic
	External		Freedom Compromised ADLs Little Change
Leisure	Challenge	No activity	Continued
	Motivation	Parkinson's disease Enjoyment	
Control	Accommodation	Medication	
	No Accommodation		Frustration

The Shavelson et al. (1976) hierarchical model of self-concept includes the social self as one component of general self-concept. Dattilo (1999) mentions self-determination as

one of the requisites to leisure behaviour and discusses enjoyment as being the resultant of leisure behaviour that leads back to both motivation and self-concept.

Figure 8: Leisure motivation between groups



3. Comparison of Intervention Group PRE and Non-Intervention Group PRE

Analysis of the focused interviews suggest the participants in the intervention group differed from participants in the non-intervention group in their perceptions of the impact Parkinson's disease had on the internal constructs, differences could be found in the academic, spiritual and self-worth areas of self-concept. In regards to the four internal indicators of self-concept the groups differed on academic, self-worth, and spiritual (see Table 9). With respect to the four external indicators of self-concept the groups differed on all four; physical, freedom, compromised ADLs and little change. These differences

offer an explanation as to why people chose the groups they did. It would appear as though there was already some difference in self-concept. Consider the following quote from a non-intervention group participant.

Tricia: "Oh it makes me feel useless.... Well, I can't do a lot of things or I get half way through and then I poop out and I have to sit down and can't finish it. I can't keep my house in order like I'd like"

The participant has a diminished self-worth, she described herself as "useless". This perception stemmed from her difficulties with physical stamina, which in turn affected her day-to-day living as well as her perceived freedom.

The participants in the intervention group and non-intervention group were similarly motivated however, the manner in which the motivations manifested themselves differed between groups. The difference in social motivation may have been a contributing factor in the decision making process when participants were determining which treatment group they would like to join as the intervention group were motivated by social interactions. The following two quotes bring to light the differences in motivations. The first example is from a participant in the non-intervention group. He described how, in social situations, he was very self-conscious and had developed strategies to minimize the appearance of Parkinson's disease.

Todd: "Not really, we ah...everybody understands what Parkinson's is you know and ah...it's something that, I know myself I try to keep away from showing as much as possible. Like my hands used to shake quite a bit you know. You learn to sit somehow so it won't show as much. You try to..."

The second quote is from a participant in the intervention group, who recognized he had lost some abilities but continued to participate because he still has "just as much fun" despite changes in his physical abilities.

Albert: "Oh, yeah. They have fun. I still golf and I don't golf as well but I still have just as much fun. You know, you set our sights a little lower, and if I get a 150-yard drive I am happy. That's a good shot for me now"

Table 9: Comparison of the intervention (pre) and non-intervention groups (pre)

Intervention PRE & Non-Intervention Group PRE			
Domain	Facets	Common to both groups	Different between groups
Impacts	Internal	Self-determination	Academic Self-worth Spiritual
	External		Physical Freedom Compromised ADLs Little Change
Leisure	Challenge	No activity	New Work Continued
	Motivation	Relaxation Parkinson's disease Enjoyment	Social
Control	Accommodation	Accepting Dropped activities Medication	
	No Accommodation		Frustration Questions Helplessness

In regards to being in control, the groups shared similar thoughts, feelings and behaviours around accommodating Parkinson's disease. The differences were found exclusively

when no accommodation was being made. For example, participants in the intervention group experienced feelings of helplessness when they felt they were losing control over their lives. Whereas participants in the non-intervention group experienced feelings of helplessness and would give-up or concede to Parkinson's disease.

Jen: "Well you have to find a balance, with what I find is that I have to rely more on people for help and I don't particularly like that (laughing). You see and you feel more dependant and I like to, we all like to have help but when you've been independent and you did all this things and all of a sudden it's not there, you know it's sorta hurt inside"

Jen was a participant in the non-intervention group, she clearly was not happy about her current functional ability however she made no mention of any strategies to counteract Parkinson's disease. Also of note is that a text search had been conducted of all the 'pre' interviews, only participants in the non-intervention and reference group referred to themselves as "dependant".

4. Comparison of Intervention Group PRE and Reference Group PRE

The participants in the intervention and reference groups were influenced differently by Parkinson's disease. In both the internal and external sense, the experience of Parkinson's disease was different. The participants in the intervention group described living with the physical symptoms as discomforting.

James: "Well the physical symptoms are difficult to deal with. The tremor for example is very disconcerting because...it is very bad on my right side and if the hand shakes a lot, if you're in a public place it's very difficult...because you don't know what do with your hand (laughing). Sometimes I put it in my pocket, sometimes sit...put it under my leg, sit on it or...so that's why in public if I'm sitting in a congregation or meeting or something I sit at the back...and near the end of a row so if I have to make an exit I can make an exit. Cause if I feel people looking at me while a tremor's happening or whatever it exsasterbates the symptoms because it makes me

feel self conscious then I...they automaticly get worse cause of the nervousness I guess.”

In contrast, the reference group described the physical symptoms as limiting in terms of what ability was left.

Paul: “Well I, for one thing I know I have limitations and I’m conscious of that all the time. I used to think nothing of going outside and cutting the grass and getting it done in a half an hour, now I depend on other people. How does that make you feel, well kind useless.”

With respect to leisure, the participants described a very similar experience. Only one difference was seen and that was in continued activities. Participants in the intervention would take on new roles in familiar activities in order to maintain participation in the activity. Whereas people in the reference group described their participation in activities from mid-life as enjoyable and made no mention of any changes/adaptations made to facilitate participation.

Will: “I take my age into consideration, and at 73 I am doing alright. I guess there might be somethings I would back away from ... I might not do something because ... when my leg is bad I hang around home for the most part.”

With regards to being in control, the intervention and reference group shared ideas on the use of medication to manage or stabilize the symptoms of Parkinson's disease. On all else the two groups differed.

The groups also differed on their accommodation methods. Consequently, the groups also differed on the results of not accomodating. For example, all of the participants experienced frustration of some sort, the differences lie in what the

participants were frustrated with. The following points illustrate the difference, the first quote is from a participant in the reference group:

Paul: "Well really what is left you know, you're a semi-invalid so any little bit of leisure you can get is helpful. So you grasp for any chance to change your routine in a leisurely way, whether it's meeting with a group or participating in line dancing or exercises... We would go with the fear that they might not ask us next time if we told them we didn't feel like going, so we go."

Table 10: Comparison between the Intervention and Reference groups PRE

Intervention PRE & Reference Groups PRE			
Domain	Facets	Common to both groups	Different between groups
Impacts	Internal	Social Self-determination	Academic Self-worth Spiritual
	External	Physical	Freedom Day-to-day Little Change
Leisure	Challenge	New Work No activity	Continued
	Motivation	Social Relaxation Parkinson's disease Enjoyment	
Control	Accommodation	Accepting Dropped activities Medication	
	No Accommodation		Frustration Questions Helplessness

Jeff: "Not entirely. It effects your...it affects your autonomic nervous system which is frustrating in some way. Um...I can't control my fine motor skills, for example trying to write and trying to use a screwdriver, screw to put in the wall to hang pictures...as I said the fine motors skills are compromised and I don't have control over that."

Paul's frustration seemed to focused around himself, he viewed himself as a "semi-invalid". Whereas the frustration Jeff experienced was not with himself but with the lost abilities.

5. Non-intervention Group PRE and Reference Group PRE

When a comparison was done between the non-intervention and Reference groups the difference was mostly in the impacts Parkinson's disease had on the external self. The participants in the non-intervention group described compromised ADLs as being stressful. In contrast the reference group described compromised ADLs as being manageable or negotiable.

Paul: "Yeah it has it's limits, I can't ah...it was nothing for me to go up the street to mail a letter on foot but I wouldn't try it with a walker. I have a scooter, I do it with the scooter, I like it, you're riding."

Paul was a participant in the reference group. He described activities of daily living that had been impacted by Parkinson's disease. Although Paul described them as being altered he had made accommodations to allow him to continue his activities of daily living.

With regards to leisure, the two groups were similar in their perceptions. In terms of challenge, the groups were similar, however the reference did not associate leisure with any work, that is, non-intervention participants associated leisure with time spent at

work with co-workers. Similarly, the reference group found relaxation through activities they were familiar with, where as the non-intervention group used relaxation to stabilize Parkinson's disease.

Jen: "Oh I love music. I have such a varied collection of music and ah...good CD and movies and terrific music and just sitting and having people over, the fellowship of talking and sharing and that. It makes a difference to my life for stabilization of Parkinson... Well it's music if I'm under stress and I will lay down to relax my whole body. And let out the emotion that way in calming myself down."

Table 11: Comparison between the Non-intervention and Reference groups PRE

Non-intervention PRE & Reference Groups PRE			
Domain	Facets	Common to both groups	Different between groups
Impacts	Internal	Social Self-worth Self-determination	Academic
	External	Physical	Freedom Day-to-day Compromised ADLs
	Challenge	New activities No activity	Work Continued
Leisure	Motivation	Social Parkinson's disease Enjoyment	Relaxation
	Accommodation	Accepting Dropped activities Medication	
Control	No Accommodation	Helplessness Questions	Frustration Resistance

These two groups shared similar experiences in terms the manner and types of accommodations made for Parkinson's disease. The differences between these two groups was in the no accommodation, the reference group did not experience frustration at all where as the non-intervention group had, and vice versa for frustration. Consider the following quotations, the first from a participant in the non-intervention group and the second from a participant in the reference group.

Tricia: Not over Parkinson's, no. It has total control over me... Yeah, there's nothing I can do to make the effects go away. I can't just build myself up or get my symptoms down. You know how when you want to run and your legs get tired so you sit down for a minute, with Parkinson's you can sit all day and it's not gonna change.

Will: Parkinson's disease is, as far as I am concerned, is a progressive disease. I choose ignore it as much as I can. Many days go by and it doesn't affect me at all. Some days it doesn't bother me and make I concessions for it.

The above quotations illustrate the differing perspectives, for the participant in the non-intervention group Parkinson's disease has "total control" over her whereas the participant in the reference group makes "concessions" for Parkinson's disease as needed. Although both participants may likely be sharing similar symptoms the manner in which the experience is processed is very different.

SUMMARY OF RESULTS

Figure 4 describes the process of how a diagnosis of Parkinson's disease, through understanding it and adapting to it, can have both physical and psycho-social impacts and how those impacts can affect health related quality of life. Figure 4 also describes how a relationship between self-concept and leisure participation, where participation in social

leisure activities influence self-concept and improvements in self-concept also influence how the participants interacted socially. Both leisure and self-concept can be linked to health related quality of life as an improved self-concept, through leisure participation, results in a response shift to improve health related quality of life.

The results indicate that there were differences between all the groups pre-intervention. The groups experienced the internal impacts differently, with respect to the academic facet some participants felt knowledge of Parkinson's disease was a tool to assist them in living with the disease, others did not. In regards to impacts experienced externally, the groups differed in their perceived freedom, compromised ADLs and little change. Differences were found in how the participants challenged themselves through leisure in that only the intervention group continued participation in activities from mid-life. One difference was found between groups in how they exert control over Parkinson's disease, frustration was felt with the non-intervention group.

Participation in the intervention yielded differences in several areas summarized in Table 7. Internally, differences were found on the impacts Parkinson's disease had on the academic, self-worth, self-determination and general self-perception domains. Externally, changes were found in physical and perceived freedom. Post intervention the manner in which the participants challenged themselves through leisure changed. The participants indicated continued participation in previous activities as well participation in new activities. Symptom management of Parkinson's disease became a motivating factor for participation in leisure. The participants in the study exercised control over Parkinson's disease by not accommodating the disease. That is the participants chose to resist the progression, which caused frustration and questions of the future.

During the post-intervention focused interviews the participants were asked for their perspectives on the intervention. Two trends emerged from the participants thoughts on the program. All of the participants in the intervention group mentioned the social relationships they developed as one of the strengths of the program.

Ben: It was a very good idea because we had a chance to meet twelve people, or ten people, that know each other much better than we knew each other before. We said hello and goodbye, it's a lovely day before. I would sit and talk with Jeff about pills we take, how often we take it, are they the same, are they different, why are we talking it. I never spoke to anybody like that before. I want know people that have the same symptoms that I do and what are they doing for it. Before I never had that chance, I had a little chance because I got around quite well and talked to everybody. However, this way when you have a few people you get to know them much better. You are closer and you feel freer to talk about these things.

The second trend that emerged relates to program design. The participants recognized how they had control over the entire process. The quotation below speaks directly to feelings of self-determination the participant experienced.

Albert: I like the ideas of us doing something. I think that was a good plan. We had ownership of it. I actually think... well we picked the Tai-Chi. It was good exposure for all of us. I think that personally I will continue doing the exercises and I will probably either get some more tapes or I will go and take a...

Albert recognized that the group had the power in the intervention development. He also mentions that he is likely to continue participating in some kind of physical activity.

James: Well, I enjoyed it. I didn't know really what to expect. I had certain expectations I guess but on the other hand you go into it not really knowing what's going to happen. We had good planning sessions and the things that we decided to do I think were good. It has added to my life, I have learned things. I got to know the people better, some of them I knew on a certain level but I got to know them a little better. Some people I have met for the first time so it has widened my acquaintances. It was good. It has been a good time in my life.

DISCUSSION

A review of literature in self-concept, Parkinson's disease and leisure was conducted in order to identify possible interactions between the constructs. The Shavelson, Hubner, and Stanton (1976) model of self-concept (Figure 1), which served as the operational definition of self-concept, became the focus. Shavelson et al. (1976) "portrayed a multidimensional and hierarchally ordered structure, with global perceptions of self as a person at the apex and actual behaviour at the base moving from the top to the bottom of the hierarchy, the structure becomes increasingly differentiated" (Byrne. 1996, p. 22). The differentiation of global self-concept results in facets or domains of functioning including but not limited to academic, social, emotional and physical self-concepts. Using the Shavelson et al. (1976) hierarchal model of self-concept, it has been discussed how Parkinson's disease can negatively influence every facet of self-concept. Consequently, a shift in health related quality of lifetakes place where Parkinson's disease acts as a catalyst altering an individual's internal standards of perceived quality of life. Keeping with the Shavelson et al. (1976) model of self-concept, research has shown (Stumbo & Peterson, 2000; Csikszentmihalyi & Klieber, 1991; Rhodewalt & Augustdottir, 1986; Haggard & Williams, 1992; Smith & Mackie, 1995; Csikszentmihalyi, 1991) that leisure can positively influence self-concept and thusly overall health related quality of life.

This research project sought to determine if a therapeutic recreation intervention could increase the global self-concept of people living in the community with Parkinson's disease in Winnipeg, Manitoba. The hypothesized result was that participation in a therapeutic recreation intervention would yield an increase in global self-concept.

Although no statistically significant results arose from the SDQ, the focused interviews provided enough information to conclude that the global self-concept of the participants had changed.

The goal of this research was to elicit positive change in self-concept using existing knowledge of self-concept, Parkinson's disease and leisure through a therapeutic recreation intervention. The implications of this project are two-fold. The primary beneficiaries are the intervention participants, as they had the opportunity to participate in an activity that was self-determined and intrinsically motivated. Through their participation, the potential to increase self-concept and consequently health-related quality of life, as well as to experience numerous benefits of leisure were provided. There are also implications for therapeutic recreation researchers and practitioners as this project has the potential to systematically demonstrate the efficacy of therapeutic recreation by demonstrating a link between an intervention and its outcomes. As well as having "the outcomes that we intend to achieve, and demonstrate that we can achieve, must be ones that are valued by third party players" (Seibert 1991, p. 7). The "third party players" in this study are the families of the participants, myself as a researcher, and the Parkinson's disease community as a whole, including researchers and doctors. From a practitioner's standpoint this research has contributed new knowledge to intervention development. The use of focused interviews produced more valuable information than the SDQ. Often practitioners rely on standardized assessment tools only, the use of both a quantitative measure as well the individuals' point view proved to be more effective. Text books, diagnoses, and standardized tools provide practitioners with knowledge of a

condition however, only through talking to an individual can we as practitioners understand how an individual is effected by the condition.

The model of self-concept that emerged from this study supports the Shavelson et al (1976) model of self-concept in that the general self-concept is at apex and is divided into broad domains. Each broad domain is broken down further into situation specific areas of functioning. The model that arose from the focused interviews functions in the same way as the Shavelson et al (1976) model in that the seven tenets in the Shavelson et al (1976) model still apply.

The model of self-concept that arose from the focused interviews follows the first tenet as it is organized or structured, in that people categorize the vast amount of information they have about themselves and relate these categories to one another. The participants in the study still categorized the information they had about themselves and related categories however the lens used to categorize the information had changed. Parkinson's disease has the potential to affect every aspect of an individual's life as such the manner which a person categorizes the information about themselves has changed as a result.

The second tenet still applies as the model is multifaceted, and the particular facets reflect a self-referent category system adopted by a particular individual and/or shared by a group. The second tenet remains intact, however the self-referent category system has changed because the participants in the study belong to a very specific group, people diagnosed with Parkinson's disease. As such the manner which information about themselves is categorized has changed.

The third tenet holds that the self-concept is hierarchical, with perceptions of persona behaviour in specific situations at the base of the hierarchy, inferences about self in broader domains (e.g., social, physical, and academic) at the middle of the hierarchy, and a global, general self-concept at the apex. Again, the tenet holds true however the persona behaviours in specific situations have changed as a result of Parkinson's disease. The changes in situation specific situations were reflected in the redefinition of the broad domains.

The fourth tenet in the Shavelson et al (1976) model holds that the hierarchical general self-concept—the apex of the hierarchy is stable, but as one descends the hierarchy, self-concept becomes increasingly situation-specific. Change in self-perceptions at the base of the hierarchy may be attenuated by conceptualizations at higher levels, and changes in general self-concept may require changes in many situation-specific instances. With respect to the participants in the study, the fourth tenet describes the impacts Parkinson's disease has had on the self-concept of the participants. The situation specific areas of functioning have felt the impacts of Parkinson's disease in that participants have lost previous abilities. As such the resonation back up the hierarchy has resulted in a change in general self-concept. Furthermore the general self-concept has been affect by situation specific so profoundly that the impact is evident in the situation specific where some participants chose to prematurely withdraw from specific activities. The fourth tenet also describes the manner in which the participants felt stigmatized by society. The effects of the stigmatization are best reflected through the Social Model of Disability (Oliver, 1996) where disability “is a consequence of the failure of social organization to take account of the differing needs of disabled people and remove the

barriers they encounter” (Oliver, 1996; p.42). As such the social model of disability recognises that some people have impairments which affect how they function physically or mentally. People with impairments may experience disability through the barriers that exist in a society that does not take account of their needs. Through this lens the individuals are disabled by society rather than feeling stigmatized by their impairments. The distinction shifts the emphasis from the internal where people feel stigmatized to the external where social barriers cause disability.

Developmentally, self-concept becomes increasingly multifaceted as the individual moves from infancy to adulthood. From a developmental stand point, the self-concept is in constant flux. Although the diagnosis of Parkinson's disease comes typically in later life the diagnosis is still reflected in self-concept.

The sixth tenet holds that the self-concept has both a descriptive and an evaluative aspect. Evaluations can be made against some absolute ideal, a relative standard based on comparisons with peers, or the expectations of significant others. The changes in the descriptive and evaluative aspects of self-concept are evident in the focused interviews with the participants. Pre-intervention, the participants describe the change in evaluations, many participants evaluated themselves against the relative standard of themselves pre Parkinson's. Most often participants would describe themselves in terms of lost abilities. The comparisons made by the intervention group post, illustrate that the intervention has changed the manner in which the participants evaluate themselves.

The final tenet, self-concept can be differentiated from other constructs to which it is theoretically related. This tenet remains intact, self-concept has been described in

and of its self and remains constant. Table 12 offers a summary of the tenets and how each one has been affected.

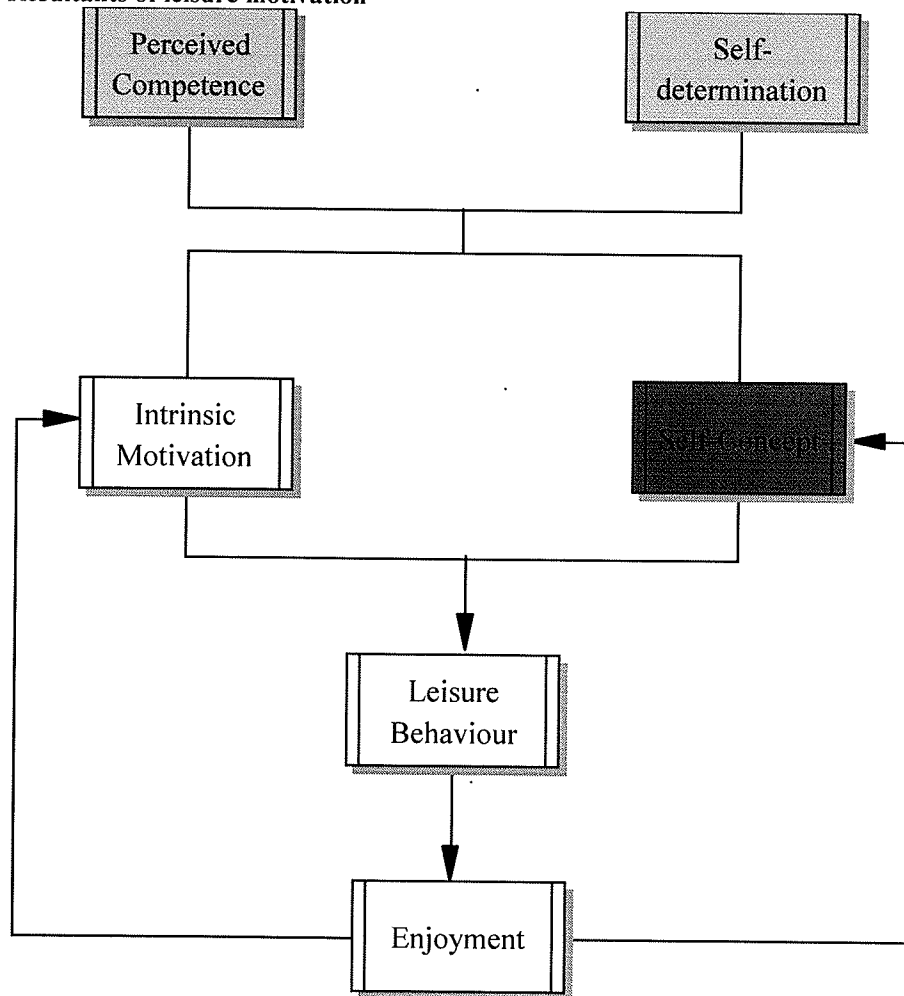
The conclusion of this study is that participation in leisure activities has the potential to increase self-concept under specific conditions. The design of this study allowed the participants to: (a) self select the group in which they would like to participate, (b) determine what the intervention was in terms of activity, (c) determine when the intervention took place, and (d) where the intervention took place. The study was designed in this way purposefully as to allow the participants to impose as much control as possible over the intervention. By allowing the participants to take as much control over the intervention as possible the participants were allowed to exercise their own self-determination and perceived competence (Figure 8).

Table 12: Summary of affected tenets	
Tenet	Parkinson's disease affect
1	New model of Self-concept where Parkinson's disease becomes the lens used to categorize information.
2	Self-referent category system changed because participants belong to a very specific group.
3	Changes in situation specific areas as a result of Parkinson's disease are reflected in the redefinition of broad domains.
4	Changes in situation specific areas of functioning resonate back up the hierarchy and result in changes in general self-concept.
5	Self-concept affected by changes in the developmental process.
6	Changes in how participants evaluated themselves. Pre-intervention comparisons were made against the standard, themselves before Parkinson's disease. Post-intervention more comparisons against one another.
7	Self-concept has been affected by Parkinson's disease as well as the intervention but remains differential from other constructs

The results of the study are congruent with the existing research as well as assumptions made prior to beginning the intervention. During the focused interviews the

participants described the impact Parkinson's disease has had on their lives. The discussions included all the domains of the Shavelson et al (1976) hierarchal model of self-concept i.e. academic, social, emotional, and physical self-concepts.

Figure 9: Resultants of leisure motivation



From "Leisure Education Program Planning: A systematic approach 2nd ed," by J. Dattilo, 1999. State College PA: Venture Publishing, Inc.

The focused interviews also brought to light the manner in which Parkinson's disease has impacted their general self-concept. Furthermore, the focused interviews post-intervention were consistent with leisure theory and Dattillo's (1999) Resultants of

leisure motivation (Figure 8). The data suggests a response shift in the participants' internal standards, values and conceptualizations had taken place as a result of participation in the intervention. The catalyst in the response shift was leisure participation, the design of the study allowed the participants determination and competence in all aspects in order to maintain internal motivation.

CONCLUSION

This study sought to examine the effects of a therapeutic recreation intervention on the self-concept of people with Parkinson's disease. The Shavelson, Hubner, and Stanton (1976) model of self-concept served as the operationalized model of self-concept. Through a review of literature the Shavelson et al. (1976) model was applied to Parkinson's disease and leisure participation. A diagnosis of Parkinson's disease has the potential to negatively impact the self-concept using the Spranger & Swartz (2000) health related quality of life response shift. Applying Spranger & Swartz (2000) quality of life response shift to leisure participation through the Dattilo (1999) resultants of leisure motivation, it has also been demonstrated how leisure participation has the ability to influence the self-concept positively if individuals are self-determined and have a perception of competence.

Participants were given the opportunity to take part in any of three treatment conditions in order to remove researcher bias and to allow the participants to self-determine participation. The 'intervention group', chose to take part in designing and implementing the intervention. The 'non-intervention' group, this group chose not to participate in the immediate offering of the intervention although participants in this group expressed a desire to participate in some intervention in the future. Participants in the 'reference' group expressed their desire not to participate in any intervention but did agree to participate in focused interviews.

The results of the study suggest that participation in a therapeutic recreation intervention can increase the self-concept of people with Parkinson's disease. The results lead to the conclusion that participation in leisure activities has the potential to increase

self-concept under specific conditions: (a) if allowed to self select which group they would like to participate in, (b) if permitted to determine the intervention in terms of activity, (c) if allowed to determine when the intervention took place, and (d) where the intervention took place. The study was designed in this way purposefully as to allow the participants to impose as much control as possible over the intervention. By allowing the participants to take as much control over their participation as possible the participants were in charge of their self-determination and thus perceived competence. This in turn, was reflected in the participants' internal motivation and belief in ability or self-concept, as reflected through the Dattilo Resultant of Leisure Motivation Model (1999). As such the effects of the intervention did not impact the self-concept directly, rather through self-determination and perceived competence. The results show the effects of the intervention were most prominent on the internal self. Specifically the academic self, self worth, self-determination and general self-perception had changed (see Table 7). The affected components supported the Shavelson et al. (1976) model of self-concept in that each of the affected areas could be linked to the middle hierarchy domains of the model. As such, the affected domains could also be linked to perceived health related quality of life through the Sprangers & Schwartz (2000) "response shift" (Figure 2). The Sprangers & Schwartz "response shift" describes "a change in the meaning of one's self-evaluation of a target construct as a result of (a) a change in the respondent's internal standards of measurement; (b) a change in the respondent's values; or (c) a redefinition of the target construct" (Sprangers & Schwartz, 2000; p. 12). Analysis of the data indicated that a shift had taken place where the internal standards, values and conceptualizations of the participants were changed.

Table 7 illustrates the effects Parkinson's disease has had on the leisure functioning of the participants in this study. The participants had some form of motivation pre intervention although the participants were not necessarily acting on the motivations pre-intervention (social, relaxation, challenge). Post-intervention the participants discussed engaging in new types of activities and taking on new roles in previously enjoyed activities. Throughout the study participants were motivated by Parkinson's disease to participate in some form of leisure. Pre-intervention the motivation for participation in leisure was symptom management; post-intervention Parkinson's disease motivated participants to participate in activities based on developing social friendships and sharing information. These results are similar to those found in the pilot study conducted in the winter of 2004. These results lead to the conclusion that actual activity is secondary to the development of social relationships for the participants who chose to take part in the intervention.

Practical implications from this study revolve around the information provided from the focused interviews. The research done prior to start of the intervention uncovered much information regarding Parkinson's disease and self-concept. Strong theoretical connections were made between the two constructs. The focused interviews however provided a personal perspective on how a common experience was interpreted. Prior to the beginning of the intervention, it was assumed that Parkinson's disease had negatively impacted all facets of the self-concept. When the focused were conducted a personal perspective was presented. For instance, the fact that the four cardinal symptoms of Parkinson's disease directly impact physical functioning and the intervention was partially based in physical activity one could assume that the physical

self-concept would be altered as a result of participation in the intervention when in fact there was no change to physical self-concept. The focused interviews with the intervention group showed that although physical functioning was impacted and the participants were trying to minimize the physical impacts; knowledge of the progression was more important than grappling with the direct effects. The non-intervention group, conversely, felt a strong sense of loss as a result of impaired physical functioning. Without the focused interview strategy these differences would not have been uncovered. The personal perspectives provided the new knowledge in this study; understanding an individual's experience of a disease proved to be more beneficial than learning how the disease affects individuals.

LIMITATIONS

The limitations of this study were sample size, length of the intervention and the SDQ. The study concluded with nineteen participants, one participant passed away during the study. The Canadian Parkinson Society estimates that there are 100,000 people living in Canada with Parkinson's disease. In order to achieve statistical significance using .019% of the population diagnosed with Parkinson's disease the effect of the intervention would have had to have been very large. The study took place over eight weeks, with one two to three hour session per week. During the post-intervention focused interviews participants indicated that the intervention could have more benefit to them if it were longer. Although the SDQ, was designed for 'adults' there was no validation done with people over the age of 55. The average age of participants in the intervention group was 64.94 years as such the tool may not have been effective.

FUTURE RESEARCH

There were several research questions that arose naturally from this research. An area for future research would be the development and validation of a standardized measure of self-concept for people over the age of 65. The self-concept becomes increasingly differentiated as one moves from infancy to adulthood (Shavelson et. al, 1976). From a therapeutic recreation standpoint are the results of this study transferable across populations, age groups etc.? That is, would any therapeutic recreation intervention, designed with the participants having the most amount of control possible, have the same out come with a different population? A third area for further exploration would involve how the self-concept influences the motivation to participate for people Parkinson's disease. The participants in this study self selected which of the three treatment conditions they wanted to take part in. What factors influenced that decision? How does self-concept fit into decision making?

REFERENCES

- Anderson, C.M. (1952). The self-image: A theory of dynamics of behaviour. *Mental Hygiene*, 36, p. 227-244.
- Asch, A. (1984). The experience of disability. *American Psychologist*. Vol 39, No 5, p. 529-36.
- Austin D., Dattilo J., McCormuck B. (2002). *Conceptual Foundations for Therapeutic Recreation*. State College, PA: Venture Pub., 2002
- Baatile J., Langbein, W., Weaver, F., Maloney, C., Jost, M. (2000). Effect of exercise on perceived quality of life of individuals with Parkinson's disease. *American Journal of Rehabilitation Research & Development* 37(5): p. 38-43.
- Bedini, L. (2001). Status of Therapeutic Recreation Research. In N. J. Stumbo (editor), *Professional Issues in Therapeutic Recreation: On competence and outcomes* (p. 335-348). Sagamore Publishing.
- Begley, A. (1999). The self-perceptions of pupils with Down syndrome in relation to their academic competence, physical competence and social acceptance. *International Journal of Disability, Development and Education*, v46, no.4; p515-529.
- Breyfogle III, F. (2003). *Implementing Six Sigma: Smarter Solutions Using Statistical Methods*. New Jersey: John Wiley & Sons Inc.
- Byrne, B., (1996). *Measuring self-concept across the life span: Issues and instrumentation*. Washington DC: American Psychological Association.
- Callahan, D. (1987). *Setting Limits: Medical goals in an aging society*. New York: Simon & Schuster.
- Carr, A. (1999) Beyond disability: measuring the social and personal consequences of osteoarthritis. *Osteoarthritis and Cartilage* 7, p. 230-238.
- Carruthers, C. (1997-98). Therapeutic Recreation Efficacy Agenda. *Annual in Therapeutic Recreation*, 7, p29-41.
- Chrischilles, E., Rubenstein, L., Voelker, M., Wallace, R. & Rodnitzky, R. (2001). Linking clinical variables to health-related quality of life in Parkinson's disease. *Parkinsonism and Related Disorder*, 8: p. 199-209.
- Compton, D., (1989). *Issues in Therapeutic Recreation: A profession in transition*. Champaign, IL: Sagamore Publishing.

- Coyle, C., Kinney, W., Riley, B., & Shank, J. (1991). *Benefits of Therapeutic Recreation: A consensus view*. State College, PA: Venture Publishing.
- Csikszentmihalyi, M. (1990) *Flow: The psychology of optimal experience*. New York: Harper and Row.
- Csikszentmihalyi, M., & Klieber, D. A., (1991). Leisure and self-actualization. In B.L. Driver, P. J. Brown, & G.L. Peterson, *Benefits of Leisure* (p. 91-102). State College, PA: Venture Publishing.
- Cubo, E., Rojoa, A., Ramosa, S., Quintanac, S., Gonzalez, M., Kompolitib, K & Aguilara, M. (2002). The importance of educational and psychological factors in Parkinson's. *European Journal of Neurology*, 9 p. 589-593.
- Cumming, E., & Henry, W. E. (1961). *Growing old: The process of disengagement*. New York: Basic Books, Inc.
- Cuskelly, M. & de Jong, I., (1996). Self-Concept in children with Down syndrome. *Down Syndrome: Research and Practice*, 13, p. 59-64.
- Dattilo, J., (1999). *Leisure Education Program Planning: A systematic approach 2nd ed.* State College PA: Venture Publishing, Inc.
- Deane, K.H., Jones D., Playford, E.D., Ben-Shlomo, Y. & Clarke C.E. (2001). Physiotherapy for patients with Parkinson's disease: a comparison of techniques. *Cochrane Database System Review* 3:CD002817.
- Deci, E. L., (1975). *Intrinsic Motivation*. New York, NY: Plenum.
- Edginton, C., Jordan, D., DeGraaf, D. & Edginton, S. (1995). *Leisure and Life Satisfaction*. Dubuque, IA: Brown & Benchmark.
- Eldar, Reuban & Marincek, Crt. (2000). Physical activity for elderly persons with neurological impairment: A review. *Scandinavian Journal of Rehabilitation Medicine*, 32(3): p. 99-103.
- Erikson, E.H. (1963). Childhood and Society. New York: W.W. Norton & Company Inc.
- Evans, B. & Lee, B. (1998). Cultural and child psychopathology. In by Evans, B. & Kazarian, S. (eds). *Cultural and Clinical Psychology: Theory, research and practice*. New York: Oxford University Press. (p. 289-316).
- Fitzsimmons, J. & Bunting, L. (1993). Parkinson's disease. Quality of life issues. *Nursing Clinical of North America*, 28: p. 807-818.

- Frankfort-Nachmias, C., & Nachmias, D. (1996). *Research Methods in the Social Sciences* (5th Ed). New York: St. Martin's Press.
- Glen, S. & Cunningham, C., (2001). Evaluation of self by young people with Down syndrome. *International Journal of Disability, Development and Education*. v48, No.2 p.193-177.
- Goetz, J.P. & LeCompte, M.D. (1984). *Ethnography and Qualitative Design in Educational Research*. Orlando FL: Academic Press.
- Goffman, E. (1963). *Stigma: Notes on the management of a spoiled identity*. Englewood Cliffs, NJ: Prentice Hall.
- Hagestuen, R., Wichmann, R. & Johnson, M. (2003). Parkinson's disease symptom management: An interdisciplinary approach. In by Rajesh Pahwa, Kelly E. Lyons, William C. Koller. *Handbook of Parkinson's disease*. New York: Dekker.
- Haggard, L.M. and Williams, D.R. (1992) Self-Identity Benefits of Leisure Activities. In Driver, B.L., Brown, P.J. & Peterson, G.L. (Eds.) (1991) *Benefits of Leisure*. State College, Pennsylvania: Venture Pub. Inc. (p.103-119).
- Harter, S., (1988). Developmental processes in the construction of the self. In T.D. Yawkey & J.E. Johnson (Eds.), *Integrative processes and socialization: Early to middle childhood* (pp.45-78). Hillsdal, NJ: Lawrence Erlbaum.
- Haun, P. 1965. *Recreation: A Medical Viewpoint*. New York: Teacher's College Press.
- Herndon, C., Young, K., Herndon, A. & Dole, E. (2000). Parkinson's Disease Revisited. *Journal of Neuroscience Nursing*, 32(4): p. 216-221.
- Hoehn, M. M., & Yahr, M. D. (1967). Parkinsonism: onset, progression and mortality. *Neurology*, 17, 427-442.
- Howe, C. (1989). Assessment instruments in therapeutic recreation: To what extent do they work? In D. Compton (ed), *Issues in therapeutic Recreation: A profession in transition* (p.204-221). Champaign, IL: Sagamore.
- <http://www.atra-tr.org/about.htm> (Accessed January 23rd 2005)
- <http://www.canadian-tr.org/> (Accessed August 25th 2006)
- <http://www.nrpa.org/department.cfm?departmentID=37&publicationID=21&SubDepartmentID=118> (Accessed February 18th 2005)

- Jackson, W. (2003). *Methods Doing Social Research* (3rd Ed). Toronto ON: Pearson Education Inc.
- Jacobson, E. (1964). *The self and the object world*. New York: International University Press.
- James, W. (1980). *Principles of Psychology* (2 vols.). Chicago: Encyclopaedia Britannica.
- James, W. [1890] (1963). *The Principles of Psychology*. New York: Holt, Rinehart & Winston.
- Jankovic, J. (1988). Parkinson's disease: recent advances in therapy. *Southern Medical Journal*. 81: p.1021-1027.
- Jankovic, J. (1992). Clinical aspects of Parkinson's disease. In by Marsden, C. D. & Fahn, S. *New Trends in the treatment of Parkinson's Disease*. Carnforth, England: Parthenon Publishing.
- Joachim, G., & Acorn, S. (2000). Living with chronic illness: The interface of stigma and normalization. *Canadian Journal of Nursing Research*, 32(3), p.37-48.
- Junco, J. & Watts, R. (2003). Management of neurobehavioral symptoms in Parkinson's disease. In by Rajesh Pahwa, Kelly E. Lyons, William C. Koller. *Handbook of Parkinson's disease*. New York: Dekker.
- Koplas, P., Gans, H., Wisely, M., Kuchibhatla, M., Cutson, T., Gold, D., Taylor, C. & Schenkman, M. (1999). Quality of life and Parkinson's disease. *Journal of Gerontology*, 54A(4P) p. M197-M202.
- Kraus, R. 1984. *Recreation and Leisure in Modern Society*. 3rd Ed. Glenview, IL: Scott, Foresman and Co.
- Kraus, R. 1990. *Recreation and Leisure in Modern Society*. 4th Ed. New York: HarperCollins.
- Leonard, N.H., Beauvais, L., & Scholl, R.W. (1995). A Self-concept Based Model of Work Motivation. *Paper presented at the annual meeting of the Academy of Management*.
- Lewis, M., & Brooks-Gunn, J. (1979). *Social cognition and the acquisition of self*. New York: Plenum.
- Losse A., Henderson, S.E., Elliman, D., Hall, D., Knight, E. & jongmans, M., (1991). Clumsiness in children-Do they grow out of it? A ten year follow up study. *Developmental Medicine and Child Neurology*, 29, p.55-68.

- MacCarthy, B. & Brown, R. (1989). Psychosocial factors in Parkinson's disease. *British Journal of Clinical Psychology*, 28: p. 41-52.
- Mannell, R., & Kleiber, D. (1997). *A Social Psychology of Leisure*. State College, PA: Venture Publishing, Inc.
- Marek, K., Jennimings, D., & Seibyl, J. (2003). Neuroimaging in Parkinson's disease. In by Rajesh Pahwa, Kelly E. Lyons, William C. Koller. *Handbook of Parkinson's disease*. New York: Dekker.
- Marsh, H. (1992). *Self Description Questionnaire III: A theoretical and empirical basis for the measurement of multiple dimensions of late adolescent self-concept. An interim test manual and research monograph*. Macarthur, New South Wales, Australia: University of Western Sydney.
- Marsh, H. and Yeung, A., (1998). Top-Down, Bottom-Up, and Horizontal Models: The Direction of Causality in Multidimensional, Hierarchical Self-Concept Models. *Journal of Personality and Social Psychology*, 75(2), p. 509-527.
- Marsh, H. W., & Shavelson, R. J. (1985). Self-concept: Its multifaceted hierarchical structure. *Educational Psychologist*, 20, 107-125.
- Marsh, H.W. & Hattie, J. (1996). Theoretical perspectives on the structure of self-concept. In Bracken, B. (ed.) *Handbook of Self-concept: Developmental, social and clinical considerations*. New York: John Wiley & Sons Inc.
- Marsh, H.W., Byrne, B.M. & Shavelson, R. (1992). A multidimensional, hierarchical self-concept. In Brinthaupt, T. & Lipka, R. (eds.), *The Self Definitional and Methodological Issues*. Albany NY: State University of New York Press.
- Martin. 1984. Whither Neurology? *New England Journal of Medecin*, 311(16): p. 1048-1050.
- Marx, R.W. & Winne, P.H. (1978). Construct interpretations of three self-concept inventories. *American Educational Research Journal* 15: p.99-108.
- Maslow, A., (1968). *Towards a psychology of being*. New York, NY: Van Nostrand Reinhold.
- McNamara, P., Durso, R. & Brown, A. (2003). Relation of "sense of self" to executive function performance in Parkinson's Disease. *Cognitive and Behavioral Neurology* 16,(3): pp139-148.
- Mead, G. H. (1934). *Mind, Self, and Society*. Chicago: University of Chicago Press.

- Meara, J., Bhowmick, B. & Hobson, P. (1999) Accuracy of diagnosis in patients with presumed Parkinson's disease. *Age and Ageing*, 28(2): pp. 99-102.
- Mercer B. (1996). A randomized study of the efficacy of the PROPATH Program for patients with Parkinson disease. *Archives of Neurology* 53(9): p.881-884.
- Michael, W.B., Smith, R. A., & Michael, J. J., (1975). The factorial validity of the Piers-Harris Children's Self-Concept Scale for each of three samples of elementary, junior high, and senior high school students in a large metropolitan school district. *Educational and Psychological Measurement*, 36, p.404-414.
- Moghal, S., Rajput, C. D., D'Arcy, C., Rajput, R. (1994). Prevalence of movement disorders in elderly community residents. *Neuroepidemiology* 13. p175-178.
- Moghal, S., Rajput, C. D., Meleth, R., D'Arcy, C., Rajput, R. (1995). Prevalence of movement disorders in institutionalized elderly. *Neuroepidemiology* 14. p297-300.
- Montgomery E.B., Lieberman, A., Singh, G. & Fries, J.F. (1994) Patient education and health promotion can be effective in Parkinson's disease: A randomized controlled trial. PROPATH Advisory Board. *American Journal of Medicine* 97: 429-435.
- Munro, B. (2001). *Statistical Methods for Health Care Research* (4th Ed). Philadelphia PA: Lippincott Williams & Wilkins.
- Oliver, M. (1990) *The politics of disablement* (Basingstoke: Macmillan).
- Oliver, M. (1996) *Understanding Disability: From Theory to Practice* (London: Macmillan).
- Orley, J. (1992). News from the World Health Organization. *Quality of Life Research*, 1(4): p.277.
- Padilla, G., & Frank-Stromborg, M. (1997). Single instruments for measuring quality of life. In by Frank-Stromborg & Olsen, S. (eds). *Instruments for Clinical Health-Care Research*. Sudbury MA: Jones and Bartlett.
- Pangman, V. & Seguire, M. (2000). Sexuality and the chronically ill older adult: a social justice issue. *Sexuality and Disability* 18 (1), p. 4959-4970.
- Parkinson's Disease Society. (1990). *Parkinson's Disease. Day-to-day*.
- Parsons, T. (1975). The sick role and the role of the physician reconsidered. *MMFQ/Health and Society* 53(3): p. 257-278.

- Pekrun, R., (2001). Self-concepts: Educational Aspects. *International Encyclopaedia of the Social & Behavioural Sciences*.
- Piers, E. V., (1984). *Piers-Harris Children's Self-Concept Scale :Revised manual*. Los Angeles, CA: Western Psychological Services.
- Reynolds, R. P., & O'Morrow, G. S. (1985). *Problems, issues & concepts in therapeutic recreation*. Englewood Cliffs, NJ: PrenticeHall, Inc.
- Reuter, I., M. Engelhardt, K. Stecker, and H. Baas (1999). Therapeutic value of exercise training in Parkinson's disease. *Med. Sci. Sports Exerc.*, Vol. 31, No. 11, p.1544–1549.
- Rhodewalt, F., & Agustsdottir, S., (1986). Effects of self-presentation on the phenomenal self. *Journal of Personality and Social Psychology*, Vol.50, No.1, p.47-55.
- Rich, C.E., Barcikowski, R.S., & Witmer, J.M. (1979). The factorial validity of the Piers-Harris Children's Self-Concept Scale for a sample of intermediate-level EMR students enrolled in elementary school. *Educational and Psychological Measurement*, 39, p.485-490.
- Rosenberg, M. (1979). *Conceiving the self*. New York: Basic.
- Scandalis T.A., Bosak A., Berliner J.C., Helman L.L. & Wells M.R. (2001). Resistance training and gait function in patients with Parkinson's disease. *American Journal of Physical Medication & Rehabilitation*,; 80(1): p. 38–43.
- Schenkman M. & Butler R.B. (1989). A model for multisystem evaluation and treatment of individuals with Parkinson's disease. *Physical Therapy*. 69: p.932-943.
- Schenkman M, & Butler R.B. (1989). A model for multisystem evaluation, interpretation, and treatment of individuals with neurologic dysfunction. *Physical Therapy*. 69: p. 538-547.
- Schoemaker, M. M., & Kalverboer, A. F., (1994). Social and affective problems of children who are clumsy: How early do they begin? *Adapted Physical Activity Quarterly*, 11, p.130-140.
- Schrag, A., Hovris, A., Morley, D., Quinn, N. and Jahanshahi, M. (2003). Young- versus older-onset Parkinson's disease: Impact of disease and psychosocial consequences. *Movement Disorders*18(11), p.1250-1256.
- Seibert, M.L. (1991). Keynote. In C.P. Coyle, W.B. Kinney, B. Rilry, & J.W. Shank (Eds.), *Benefits of therapeutic recreation: A consensus view* (pp.5-15). State College, PA: Venture Publishing.

- Sethi, K. (2003). Differential diagnosis of Parkinsonism. In by Rajesh Pahwa, Kelly E. Lyons, William C. Koller. *Handbook of Parkinson's disease*. New York: Dekker.
- Shavelson, R.J., & Bolus, R. (1982). Self-concept: The Interplay of Theory and Methods. *Journal of Educational Psychology*, 74, 3-17.
- Shavelson, R.J., Hubner, J. J., & Stanton, G. C. (1976). Validation of Construction Interpretations. *Review of Educational Research*, 46, 407-441.
- Shindler, J., Brown, R., Welburn, P., Parkes, J. (1993). Measuring quality of life of patients with Parinson's disease. In: Walker S., & Rosser, R. (eds). *Quality of Life Assessment: Key issues in the 1990s*. Dordrecht: Kluwer Academic Publishers.
- Silson, J., Cohen, E., & Hill, B. (1959) *Recreation in Hospitals: Report of a Study of Organized Recreation Programs in Hospitals and the Personnel Conducting Them*. New York: Nation Recreation Association.
- Siminski, P. (2003). Patterns of disability and norms of participation through the life course: empirical support for a social model of disability. *Disability & Society*, 18(6): p. 707-718.
- Singer, E. 1973. Social costs of Parkinson's disease. *Journal of Chronic Disease Vol* 26(4): p. 243-254.
- Smith, E.R. & Mackie, D.M. (1995). *Social Psychology*, New York: Worth.
- Soars, L.M. & Soars, A.T. (1977, April). *The self-concept: Mini, maxi, multi*. Paper presented at the annual meeting of the American Educational Research Association, New York.
- Soars, L.M. & Soars, A.T. (1982, July). *Convergence and discrimination in academic self-concepts*. Paper presented at the 20th Congress of the International Association of Applied Psychology, Edinburgh, Scotland.
- Soars, L.M. & Soars, A.T. (1983, April). *Compnents of students' self-related cognitions*. Paper presented at the annual meeting of the American Educational Research Association, Montreal, Quebec.
- Spranger, M & Swartz, C. (2000). *Adaptation to Changing Health: Response shift in quality-of-life research*. Washington DC: American Psychological Association.
- Stacy, M., Jankovic J. Clinical and neurobiological aspects of Parkinson's disease. In: Huber S.J., Cummings J.L. (eds.) *Parkinson's Disease: Neurobehavioral Aspects*. New York, NY: Oxford University Press Inc; 1992:10-13.

- Stern, G. & Lees, A. 1991. Parkinson's Disease. The facts. Oxford University Press.
- Stewart, A.L., & King, A.C. (1991) Evaluating the efficacy of physical activity for influencing quality of life outcomes in older adults. *Annals of Behavioral Medicine*, 13, p. 108-116.
- Stumbo, N., & Hess, M. (2001). On Competences and Outcomes in Therapeutic Recreation. In N. J. Stumbo (editor), *Professional Issues in Therapeutic Recreation: On competence and outcomes* (pp.3-20). Sagamore Publishing.
- Stumbo, N. & Perterson, C. (2000). *Therapeutic Recreation Program Design: Principles and procedures* (3rd ed.). Boston: Allyn & Bacon.
- Sullivan, H. S. (1953). The interpersonal theory of psychiatry. New York: Norton.
- Teichberg, A. (2000). Self-Care: A parkinsonian's wellness map. In: Cote, L., Sprinzeles, L., Elliott, R. & Kutscher, A. (eds). *Parkinson's Disease and Quality of Life*. New York: Haworth.
- The Global Parkinson's Disease Survey (GPDS) Steering Committee. Factors impacting on quality of life in Parkinson's disease: Results from an international survey. *Movement Disorders* (2002); 17: 60-67.
- Troster, A., and Woods, S. (2003). Neuropsychological aspects of Parkinson's disease and Parkinsonian Syndromes. In by Rajesh Pahwa, Kelly E. Lyons, William C. Koller. *Handbook of Parkinson's disease*. New York: Dekker.
- Union of the Physically Impaired Against Segregation (UPIAS) (1976) *Fundamental principles of disability* (London: UPIAS).
- Üstün, T. B., Cooper, J. E., Van Duuren-Kristen, S., Kennedy, C., Hendershot, G. and Sartorius, N., (1995). Revision of the ICDH: Mental health aspects. *Disability and Rehabilitation* 17, pp. 202-209.
- Vernon, G. & Stern, M. (1988). The comprehensive approach to Parkinson's disease. In: Stern, M. & Hurtig, H. (eds). *The Comprehensive Management of Parkinson's Disease*. New York: PMA.
- Weiss, J., Diamond, T., Demark, J. & Lovald, B. (2003). Involvement in Special Olympics and its relations to self-concept and actual competency in participants with developmental disabilities. *Research in Developmental Disabilities*, 24, pp. 281-305.

- Widaman, K.F., Stacy, A.W., and Borthwick-Duffy, S.A. (1993). Construct validity of dimensions of adaptive behavior: A multitrait-multimethod evaluation. *American Journal on Mental Retardation*, 98(2), p.219-234.
- Witt, Peter, A. (1971). A History of Recreation for the Mentally Retarded. *Mental Retardation*. 9: p. 50-53.
- Wolf, T.M., Sklov, M.C., Hunter, S.M., Webber, L.S., & Berenson, G.S. (1982). Factor analytic study of Piers-Harris Children's Self-Concept Scale. *Journal of Personality Assessment*, 46, p.511-513.
- Wylie, R.C. *The self-concept*. Vol. 2: *Theory and Research on selected Topics*. Lincoln: University of Nebraska Press, 1979.
- Wylie, R.C., (1989). *Measures of self-concept*. Lincoln and London: University of Nebraska Press.

APPENDIX I- SELF DESCRIPTION QUESTIONNAIRE-III

SELF DESCRIPTION QUESTIONNAIRE – III

SDQ III

Surname _____ First Name: _____ Circle one: Male Female

Date of Birth (e.g. 11/09/60) _____ Today's Date: _____

This is a chance for you to consider how you think and feel about yourself. This is not a test – there are no right or wrong answers, and everyone will have different responses. The purpose of this study is to determine how people describe themselves and what characteristics are most important to how people feel about themselves.

On the following pages are a series of statements that are more or less true (or more or less false) descriptions of you. Please use the following eight-point response scale to indicate how true (or false) each item is as a description of you. Respond to the items as you now feel even if you felt differently at some other time in your life. In a few instances, an item may no longer be appropriate to you, though it was at an earlier period of your life (e.g., an item about your present relationship with your parents if they are no longer alive). In such cases, respond to the item as you would have when it was appropriate. Try to avoid leaving any items blank.

After completing all the items, you will be asked to select those that best describe important aspects – either positive or negative – of how you feel about yourself. Consider this as you are completing the survey.

1 Definitely False	2	3 Mostly False	4 More false than true	5 More true than false	6 Mostly True	7 True	8 Definitely True
--------------------------	---	----------------------	------------------------------	------------------------------	---------------------	-----------	-------------------------

ID	Surname	First Name	Sex 1 - Male 2 - Female	DOB	Date	Time
----	---------	------------	-------------------------------	-----	------	------

1 Definitely False	2 False	3 Mostly False	4 More False Than True	5 More True Than False	6 Mostly True	7 True	8 Definitely True
--------------------------	------------	----------------------	------------------------------	------------------------------	---------------------	-----------	-------------------------

_____ 1	I find many mathematical problems interesting and challenging.	_____ 29	Overall, I am pretty accepting of myself.
_____ 2	My parents are not very spiritual/religious people.	_____ 30	Being honest is not particularly important to me.
_____ 3	Overall, I have a lot of respect for myself.	_____ 31	I have lots of friends of the opposite sex.
_____ 4	I often tell small lies to avoid embarrassing situations.	_____ 32	I have a poor vocabulary.
_____ 5	I get a lot of attention from members of the opposite sex.	_____ 33	I am happy most of the time.
_____ 6	I have trouble expressing myself when trying to write something.	_____ 34	I still have many unresolved conflicts with my parents.
_____ 7	I am usually pretty calm and relaxed.	_____ 35	I like most academic subjects.
_____ 8	I hardly ever saw things the same way as my parents when I was growing up.	_____ 36	I wish I had more imagination and originality.
_____ 9	I enjoy doing work for most academic subjects.	_____ 37	I have a good body build.
_____ 10	I am never able to think up answers to problems that haven't been already figured out.	_____ 38	I don't get along very well with other members of the same sex.
_____ 11	I have a physically attractive body.	_____ 39	I have good endurance and stamina in sports and physical activities.
_____ 12	I have few friends of the same sex that I can really count on.	_____ 40	Mathematics makes me feel inadequate.
_____ 13	I am a good athlete.	_____ 41	Spiritual/religious beliefs make my life better and make me a happier person.
_____ 14	I have hesitated to take courses that involve mathematics.	_____ 42	Overall, I don't have much respect for myself.
_____ 15	I am a spiritual/religious person.	_____ 43	I nearly always tell the truth.
_____ 16	Overall, I lack self-confidence.	_____ 44	Most of my friends are more comfortable with members of the opposite sex than I am.
_____ 17	People can always rely on me.	_____ 45	I am an avid reader.
_____ 18	I find it difficult to meet members of the opposite sex whom I like.	_____ 46	I am anxious much of the time.
_____ 19	I can write effectively.	_____ 47	My parents have usually been unhappy or disappointed with what I do and have done.
_____ 20	I worry a lot.	_____ 48	I have trouble with most academic subjects.
_____ 21	I would like to bring up children of my own (if I have any) like my parents raised me.	_____ 49	I enjoy working out new ways of solving problems.
_____ 22	I hate studying for many academic subjects.	_____ 50	There are lots of things about the way I look that I would like to change.
_____ 23	I am good at combining ideas in ways that others have not tried.	_____ 51	I make friends easily with members of the same sex.
_____ 24	I am ugly.	_____ 52	I hate sports and physical activities.
_____ 25	I am comfortable talking to members of the same sex.	_____ 53	I am quite good at mathematics.
_____ 26	I am awkward and poorly coordinated at many sports and physical activities.	_____ 54	My spiritual/religious beliefs provide the guidelines by which I conduct my life.
_____ 27	I have generally done better in mathematics courses than other courses.	_____ 55	Overall, I have a lot of self-confidence.
_____ 28	Spiritual/religious beliefs have little to do with my life philosophy.	_____ 56	I sometimes take things that do not belong to me.

1 Definitely False	2 False	3 Mostly False	4 More False Than True	5 More True Than False	6 Mostly True	7 True	8 Definitely True
--------------------------	------------	----------------------	------------------------------	------------------------------	---------------------	-----------	-------------------------

- | | | | |
|--------|--|---------|--|
| ___ 57 | I am comfortable talking to members of the opposite sex. | ___ 85 | I do not spend a lot of time worrying about things. |
| ___ 58 | I do not do well on tests that require a lot of verbal reasoning ability. | ___ 86 | My parents treated me fairly when I was young. |
| ___ 59 | I hardly ever feel depressed. | ___ 87 | I learn quickly in most academic subjects. |
| ___ 60 | My values are similar to those of my parents. | ___ 88 | I am not very original in my ideas, thoughts, and actions. |
| ___ 61 | I am good at most academic subjects. | ___ 89 | I have nice facial features. |
| ___ 62 | I am not much good at problem solving. | ___ 90 | Not many people of the same sex like me. |
| ___ 63 | My body weight is about right (neither too fat nor too skinny). | ___ 91 | I like to exercise vigorously at sports and/or physical activities. |
| ___ 64 | Other members of the same sex find me boring. | ___ 92 | I never do well on tests that require mathematical reasoning. |
| ___ 65 | I have a high energy level in sports and physical activities. | ___ 93 | I am a better person as a consequence of my spiritual/religious beliefs. |
| ___ 66 | I have trouble understanding anything that is based upon mathematics. | ___ 94 | Overall, I have pretty positive feelings about myself. |
| ___ 67 | Continuous spiritual/religious growth is important to me. | ___ 95 | I am a very honest person. |
| ___ 68 | Overall, I have a very good self-concept. | ___ 96 | I have had lots of feelings of inadequacy about relating to members of the opposite sex. |
| ___ 69 | I never cheat. | ___ 97 | I am good at expressing myself. |
| ___ 70 | I am quite shy with members of the opposite sex. | ___ 98 | I am often depressed. |
| ___ 71 | Relative to most people, my verbal skills are quite good. | ___ 99 | It has often been difficult for me to talk to my parents. |
| ___ 72 | I tend to be highly - strung, tense, and restless. | ___ 100 | I hate most academic subjects. |
| ___ 73 | My parents have never had much respect for me. | ___ 101 | I am an imaginative person. |
| ___ 74 | I am not particularly interested in most academic subjects. | ___ 102 | I wish that I were physically more attractive. |
| ___ 75 | I have a lot of intellectual curiosity. | ___ 103 | I am popular with other members of the same sex. |
| ___ 76 | I dislike the way I look. | ___ 104 | I am poor at most sports and physical activities. |
| ___ 77 | I share lots of activities with members of the same sex. | ___ 105 | At school, my friends always came to me for help in mathematics. |
| ___ 78 | I am not very good at any activities that require physical ability and coordination. | ___ 106 | I am basically an atheist, and believe that there is no being higher than man. |
| ___ 79 | I have always done well in mathematics classes. | ___ 107 | Overall, I have a very poor self-concept. |
| ___ 80 | I rarely if ever spend time in spiritual meditation or religious prayer. | ___ 108 | I would feel OK about cheating on a test as long as I did not get caught. |
| ___ 81 | Overall, nothing that I do is very important. | ___ 109 | I am comfortable being affectionate with members of the opposite sex. |
| ___ 82 | Being dishonest is often the lesser of two evils. | ___ 110 | In school I had more trouble learning to read than most other students. |
| ___ 83 | I make friends easily with members of the opposite sex. | ___ 111 | I am inclined towards being an optimist. |
| ___ 84 | I often have to read things several times before I understand them. | ___ 112 | My parents understand me. |

1 Definitely False	2 False	3 Mostly False	4 More False than True	5 More True than False	6 Mostly True	7 True	8 Definitely True
--------------------------	------------	----------------------	------------------------------	------------------------------	---------------------	-----------	-------------------------

- | | | | |
|---------|---|---------|---|
| ___ 113 | I get good marks in most academic subjects. | ___ 125 | I like my parents. |
| ___ 114 | I would have no interest in being an inventor. | ___ 126 | I could never achieve academic honours, even if I worked harder. |
| ___ 115 | Most of my friends are better looking than I am. | ___ 127 | I can often see better ways of doing routine tasks. |
| ___ 116 | Most people have more friends of the same sex than I do. | ___ 128 | I am good looking. |
| ___ 117 | I enjoy sports and physical activities. | ___ 129 | I have lots of friends of the same sex. |
| ___ 118 | I have never been very excited about mathematics. | ___ 130 | I am a sedentary type who avoids strenuous activity. |
| ___ 119 | I believe that there will be some form of continuation of my spirit or soul after my death. | ___ 131 | Overall, I do lots of things that are important. |
| ___ 120 | Overall, I have pretty negative feelings about myself. | ___ 132 | I am not a very reliable person. |
| ___ 121 | I value integrity above all other virtues. | ___ 133 | Spiritual/religious beliefs have little to do with the type of person I want to be. |
| ___ 122 | I never seem to have much in common with members of the opposite sex. | ___ 134 | I have never stolen anything of consequence. |
| ___ 123 | I have good reading comprehension. | ___ 135 | Overall, I am not very accepting of myself. |
| ___ 124 | I tend to be a very nervous person. | ___ 136 | Few, if any of my friends are very spiritual or religious. |

Different characteristics, both positive and negative, vary in their importance in determining how you feel about yourself. For example, the statement "I am musically talented" may be very inaccurate as a description of you, but it may also be very unimportant about how you feel about yourself. Below are statements about different characteristics. For each statement please judge: 1) how ACCURATE the statement is as a description of you; and 2) how IMPORTANT the characteristic is in determining how you feel (either positive or negative) about yourself. Please use the following response scale:

1	2	3	4	5	6	7	8	9
Very Inaccurate Very Unimportant		Inaccurate Unimportant		Moderate or Average		Accurate Important		Very Accurate Very Important

ACCURACY:
How accurate is this statement about you?

IMPORTANT:
How important is the characteristic to you?

- | | | |
|-------|---|-------|
| _____ | I am good at sports and physical activities . | _____ |
| _____ | I am physically attractive/good looking | _____ |
| _____ | I have good interactions/relationships with members of the opposite sex | _____ |
| _____ | I have good interactions/relationships with members of the same sex | _____ |
| _____ | I have good interactions/relationships with my parents | _____ |
| _____ | I am an emotionally stable person | _____ |
| _____ | I am a spiritual/religious person | _____ |
| _____ | I am an honest/reliable/trustworthy person | _____ |
| _____ | I have good verbal skills/reasoning ability | _____ |
| _____ | I have good mathematical skills/reasoning ability | _____ |
| _____ | I am a good student in most academic subjects | _____ |
| _____ | I am good at problem solving/creative thinking | _____ |

APPENDIX II- INTERVIEW SCHEDULE

The following is the interview schedule for this research. The interview questions will focus on the participants' past and present recreation involvement.

- 1) Can you tell me about the types of things you like to do for fun?
 - what about that did you enjoy?
 - where did you typically do those things?
 - with whom did you do them?
 - how often did you take part in these?
 - how did you get started in these activities?
 - why do you continue to participate in these?

- 2) Tell me about activities you used to do for fun?
 - what about that activity did you enjoy?
 - why did you stop doing them?
 - are you still interested in that activity
 - if so, would you like to start participating in that activity again?
 - why or why not.

- 3) How do you feel the diagnosis of Parkinson's Disease has affected the way you approach your leisure time?
 - how has your participation in recreation/leisure changed as a result?
 - how does that make you feel?

- 4) If you could do anything with respect to leisure/recreation, what would you like to do?
 - have you done that before?
 - why did you choose that?
 - what about that activity appeals to you?
 - who would you like to do it with?

- 5) Do you belong to any organizations (e.g. social groups, clubs, sports etc.)?
 - how did you come to be a member?
 - what attracted you to that organization?
 - what does belonging to that group mean to you?
 - are there any groups you used to be involved in?
 - why aren't you involved with that group now?
 - would you be interested in re-joining that group or one similar?

- 6) How aware are you of recreation in your life?
 - is recreation/leisure important to you?
 - why or why not?
 - is there anything you would like to change about your recreation/leisure participation?

- 7) When you heard about this study; why did you choose to participate?

APPENDIX III- APPROVAL CERTIFICATES

APPROVAL CERTIFICATE

25 February 2004

TO: Patrick R. Falastein (Advisor C. Blais)
Principal Investigator

FROM: Stan Straw, Chair
Education/Nursing Research Ethics Board (ENREB)

Re: Protocol #E2004:031
"Therapeutic Recreation Programs for People with Parkinson's
Disease: Can Nonstructured Interviews Determine their Interests and
Future Goals"

Please be advised that your above-referenced protocol has received human ethics approval by the **Education/Nursing Research Ethics Board**, which is organized and operates according to the Tri-Council Policy Statement. This approval is valid for one year only.

Any significant changes of the protocol and/or informed consent form should be reported to the Human Ethics Secretariat in advance of implementation of such changes.

Please note that, if you have received multi-year funding for this research, responsibility lies with you to apply for and obtain Renewal Approval at the expiry of the initial one-year approval; otherwise the account will be locked.

APPROVAL CERTIFICATE

13 September 2004

TO: Patrick Falastein
Principal Investigator

FROM: Stan Straw, Chair
Education/Nursing Research Ethics Board (ENREB)

Re: Protocol #E2004:081
**“The Effects of a Therapeutic Recreation Intervention on the Self-
concept of People with Parkinson’s Disease”**

Please be advised that your above-referenced protocol has received human ethics approval by the **Education/Nursing Research Ethics Board**, which is organized and operates according to the Tri-Council Policy Statement. This approval is valid for one year only.

Any significant changes of the protocol and/or informed consent form should be reported to the Human Ethics Secretariat in advance of implementation of such changes.

Please note that, if you have received multi-year funding for this research, responsibility lies with you to apply for and obtain Renewal Approval at the expiry of the initial one-year approval; otherwise the account will be locked.

APPENDIX IV- INTERVENTION

At the time of the pre-interview participants who had chosen to take part in the intervention group were told the intervention would begin with a leisure education program. One of the participants volunteered the use of a boardroom located in his condominium building. All participants were consulted in regards to date and time of day for the leisure education sessions.

The first leisure education session began with an overview of the entire study. The overview included a time frame, week 1 leisure education, week 2 planning/goal setting and week 3-6 participation. Although the sessions were described as 'weeks' each of the leisure education and the planning/goal setting took two three hour sessions that took place over two weeks.

The leisure education session began with a definition of leisure education. Leisure education is a process through which people go to become self determining or independent in their leisure. The goal of leisure education is to provide enough knowledge and skills to make an informed and independent choice for his or her future leisure participation.

The definition was elaborated on by applying the concept directly to the intervention. It was explained that we as a group would go through the leisure education process and afterward they, the participants would make an informed and independent

choice for the leisure participation portion of the intervention. Discussion then turned to defining what leisure is. To facilitate the discussion of leisure the concepts of sport, recreation and leisure were discussed. Each concept was discussed in terms of characteristics, motivation for participation (internal or external) and outcomes.

Sport was the first concept discussed. Some characteristics the participants identified were: physical, competitive, known rules and specific forms. When the participants were asked what the motivation for participation in sport was “winning” was immediately yelled out. The participants were asked if winning was an internal or external motivation. The group was unable to come to a consensus on the motivation for sport. When the idea of winning as external recognition of achievement was introduced the group then decided that sport was externally motivated and that outcome was success or failure.

The next concept discussed was ‘recreation’. When asked what the characteristics of recreation were the group identified: voluntary, anything and contrast to sheer idleness. When asked about the motivation of recreation most of the group identified that recreation was internally motivated. I challenged the group by asking about recreational sport, asking if they thought some people wanted to win a recreational game, league or tournament. The group then agreed that recreation could be either internally or externally motivated. In terms of the outcome of recreation the group identified winning, fun and fitness.

When the discussion turned to leisure, three concepts were introduced, leisure as: time, behaviour and state of mind. In reference to leisure as time, leisure was discussed as time free of obligation. Leisure as behaviour was discussed in terms of those activities

people pursued that brought people a sense of relaxation and rejuvenation. Leisure as a state of mind was presented as those activities individuals pursued that facilitated self-expression, self-exploration, or self-improvement. It was elaborated that when leisure was a state of mind there was some element of personal growth or exploration.

Although the first session was meant to introduce the concepts of leisure and leisure education the participants requested to brainstorm ideas for the intervention. At that time the participants suggested several activities: round table discussion, walking, meal planning/preparation, exercise, computer, sketching, journal club, choir, and telling jokes/laughter.

The second leisure education session began with a brief review of leisure. After the review six leisure categories were introduced: social interaction, creative expression, physical activity, spectator appreciation, intellectual stimulation and solitary relaxation. Each of the categories was discussed, examples of each type of activity were given and overlaps were pointed out. The Manitoba Parkinson's Disease Society weekly exercise class was used as an example to illustrate how one activity can fit into several leisure categories. In the exercise class the activity is predominantly physical however, there is a social component between the participants in the class, and there was also a component of intellectual stimulation as participants learn from one another.

The participants identified the following characteristics for each of the leisure categories.

Social interaction

1. friendship
2. common thread
3. encouragement
4. increased self-esteem

5. learning

6. enjoyment

7. new experiences

8. supporting others

9. acceptance

Creative Expression

1. useful

2. sense of satisfaction

3. learning

4. exploring

5. self-expression

6. emotional release

7. therapeutic

Physical Activity

1. emotional release

2. improve health/wellness

(mental and physical)

a. improved sleep hygiene

b. increased appetite

3. stress reduction

4. satisfaction

5. meeting people

6. set and pursue goals

Spectator Appreciation

1. social interaction

2. emotional release

3. appreciation for talent

4. mental escape

5. learning

6. reason to get out

7. exposure to new
experiences

8. emotional bonding

9. enjoyment

10. reminiscence

Intellectual stimulation

1. learning

2. increased memory retention
3. sense of greater control
4. improved confidence
5. increased self-esteem
6. increased concentration
7. self-acceptance of disability
8. enjoyment
9. understanding
10. hope

Solitary Relaxation

1. clearing your head
2. at peace
3. self-contemplation
4. self-reflection
5. enjoyment
6. regrouping (fresh approach/new perspective)
7. relaxation
8. meditation

Final summary of the characteristics of each type of leisure were reviewed, emphasis was placed on the common characteristics across the categories. The common characteristics were enjoyment, improved self-esteem and self-improvement. Again, at the end of the session the participants wanted to discuss what activity we would be doing in the intervention.

The final leisure education was applying the knowledge of leisure to the intervention. That is, to decide specifically what, where, when and how the intervention would run. This process consisted of a brain storming session where the participants were asked what they wanted from the intervention. Tai Chi, board games/card games and a round table/knowledge sharing were the suggestions that emerged from that discussion. There were several other suggestions that the group could not come to agreement on. For example one participant suggested a cooking program where the participants could prepare large meals and take them home with them, almost immediately another participant stated "I don't cook at home, why would I cook here?".

The participants agreed on a program that was half tai chi and half round table, where I would be responsible for find speakers on topics they requested. The topics of interest were occupational therapy, nutrition, pharmacology, and personal sharing.

Guest speakers were arranged from each of the topics the group had requested. From speech therapy, Kimberly S. Aridano, a private practice licensed speech-language pathologist. Pharmacologist Kristine, with Misericordia Health Centre. Professor James Friel from the University of Manitoba, Human Nutritional Sciences spoke on nutrition. From Occupational Therapy, Trish Lavergne from Misericordia Health Centre. Each of

the speakers were asked to present for 15-20 there area of expertise and then take questions from the group. The question sessions were approximately 40 minutes.

APPENDIX V- KRUSKAL-WALLIS RESULTS

NPar Tests

Notes

Output Created		21-OCT-2005 14:43:01
Comments		
Input	Data	C:\Documents and Settings\Pat\My Documents\scores2.sav
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	19
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics for each test are based on all cases with valid data for the variable(s) used in that test.
Syntax		<pre> NPAR TESTS /K-S(NORMAL)= math.pre relg.pre gen.pre hnst.pre opsexpre verb.pre emot.pre prnt.pre acad.pre prob.pre aper.pre ssex.pre able.pre math.pst relg.pst gen.pst hnst.pst opsexpst verb.pst emot.pst prnt.pst acad.pst prob.pst aper.pst ssex.pst able.pst totalpre totalpst diff /MISSING ANALYSIS. </pre>
Resources	Number of Cases Allowed(a)	32768 cases
	Elapsed Time	0:00:00.17

a Based on availability of special working memory.

		MATH. PRE	REL. PRE	GEN.P RE	HST. PRE	OSEX PRE	VERB. PRE	EMO.P RE	PRNT. PRE	ACAD. PRE	PROB. PRE	APER. PRE	SSEX. PRE	ABLE. PRE
N		19	19	19	19	19	19	19	19	19	19	19	19	19
Normal Parameters (a,b)	Mean	41.3158	66.5789	66.0000	68.12 63	55.7368	54.3684	60.0000	51.5263	41.0526	62.2105	43.5789	44.9474	27.0000
	Std. Deviation	27.8409 2	30.7576 8	24.4608 5	28.99 488	29.2647 7	30.6217 3	27.3800 4	28.5021 8	28.5491 3	26.9497 0	26.8727 8	29.6675 5	24.8864 1
Most Extreme Differences	Absolute	.157	.203	.138	.199	.160	.150	.136	.117	.184	.181	.117	.145	.200
	Positive	.157	.153	.095	.140	.160	.112	.133	.117	.157	.086	.117	.145	.200
	Negative	-.123	-.203	-.138	-.199	-.157	-.150	-.136	-.107	-.184	-.181	-.097	-.117	-.164
Kolmogorov- Smirnov Z	.686	.883	.599	.868	.698	.653	.593	.509	.803	.789	.511	.633	.873	
Asymp. Sig. (2-tailed)	.734	.416	.865	.438	.715	.788	.874	.958	.539	.562	.957	.818	.431	

		MATH .PST	REL. PST	GEN .PST	HST. PST	OSEX PST	VERB .PST	EMO .PST	PRNT .PST	ACAD .PST	PROB .PST	APER .PST	SSEX. PST	ABLE. PST	TOTAL PRE	TOTAL PST	DIFF
N		19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19
Normal Parameters (a,b)	Mean	41.736 8	68.89 47	62.15 79	67.26 32	52.184 2	54.000 0	52.00 00	55.263 2	43.473 7	52.842 1	52.473 7	48.000 0	28.526 3	682.442 1	678.815 8	-3.62 63
	Std. Deviation	28.743 78	25.08 185	24.16 670	23.72 023	27.768 49	27.952 34	28.99 617	30.619 24	33.146 76	30.609 12	25.645 81	31.534 81	24.882 77	180.471 12	206.970 83	83.89 026
Most Extreme Differences	Absolute	.132	.168	.132	.170	.094	.136	.174	.153	.182	.095	.157	.207	.164	.104	.105	.124
	Positive	.132	.161	.073	.090	.069	.087	.174	.138	.182	.095	.146	.207	.164	.081	.105	.124
	Negative	-.126	-.168	-.132	-.170	-.094	-.136	-.171	-.153	-.129	-.087	-.157	-.129	-.134	-.104	-.075	-.110
Kolmogorov -Smirnov Z	.686	.576	.732	.574	.741	.409	.595	.759	.668	.792	.414	.682	.903	.714	.454	.457	.540
Asymp. Sig. (2-tailed)	.734	.894	.657	.896	.642	.996	.871	.612	.764	.558	.996	.740	.389	.688	.986	.985	.932

One-Sample Kolmogorov-Smirnov Test

a Test distribution is Normal.

b Calculated from data.

NPar Tests

Notes

Output Created		21-OCT-2005 14:45:06
Comments		
Input	Data	C:\Documents and Settings\Pat\My Documents\scores2.sav
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	19
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics for each test are based on all cases with valid data for the variable(s) used in that test.
Syntax		<pre> NPAR TESTS /K-W=math.pre relg.pre gen.pre hnst.pre opsexpre verb.pre emot.pre prnt.pre acad.pre prob.pre aper.pre ssex.pre able.pre math.pst relg.pst gen.pst hnst.pst opsexpst verb.pst emot.pst prnt.pst acad.pst prob.pst aper.pst ssex.pst able.pst totalpre totalpst diff BY group(1 3) /MISSING ANALYSIS. </pre>
Resources	Number of Cases Allowed(a)	29959 cases
	Elapsed Time	0:00:00.14

a Based on availability of special working memory.

Kruskal-Wallis Test

Ranks

	GROUP	N	Mean Rank
MATH.PRE	Intervention Group	8	12.63
	Non Intervention Group	6	9.00
	Reference Group	5	7.00
	Total	19	
RELG.PRE	Intervention Group	8	9.38
	Non Intervention Group	6	9.92
	Reference Group	5	11.10
	Total	19	
GEN.PRE	Intervention Group	8	9.94
	Non Intervention	6	8.50

	Group		
	Reference Group	5	11.90
	Total	19	
HNST.PRE	Intervention Group	8	11.50
	Non Intervention Group	6	9.25
	Reference Group	5	8.50
	Total	19	
OPSEXPRES	Intervention Group	8	11.31
	Non Intervention Group	6	7.58
	Reference Group	5	10.80
	Total	19	
VERB.PRE	Intervention Group	8	10.63
	Non Intervention Group	6	9.08
	Reference Group	5	10.10
	Total	19	
EMOT.PRE	Intervention Group	8	11.13
	Non Intervention Group	6	6.58
	Reference Group	5	12.30
	Total	19	
PRNT.PRE	Intervention Group	8	8.63
	Non Intervention Group	6	12.17
	Reference Group	5	9.60
	Total	19	
ACAD.PRE	Intervention Group	8	10.81
	Non Intervention Group	6	8.42
	Reference Group	5	10.60
	Total	19	
PROB.PRE	Intervention Group	8	10.63
	Non Intervention Group	6	9.67
	Reference Group	5	9.40
	Total	19	
APER.PRE	Intervention Group	8	9.31
	Non Intervention Group	6	8.33
	Reference Group	5	13.10
	Total	19	
SSEX.PRE	Intervention Group	8	11.00
	Non Intervention Group	6	7.50
	Reference Group	5	11.40
	Total	19	
ABLE.PRE	Intervention Group	8	11.38
	Non Intervention Group	6	7.75
	Reference Group	5	10.50

	Total	19	
MATH.PST	Intervention Group	8	12.56
	Non Intervention Group	6	8.00
	Reference Group	5	8.30
	Total	19	
RELG.PST	Intervention Group	8	9.50
	Non Intervention Group	6	11.08
	Reference Group	5	9.50
	Total	19	
GEN.PST	Intervention Group	8	10.75
	Non Intervention Group	6	6.00
	Reference Group	5	13.60
	Total	19	
HNST.PST	Intervention Group	8	11.06
	Non Intervention Group	6	9.58
	Reference Group	5	8.80
	Total	19	
OPSEXPST	Intervention Group	8	11.38
	Non Intervention Group	6	7.17
	Reference Group	5	11.20
	Total	19	
VERB.PST	Intervention Group	8	10.88
	Non Intervention Group	6	8.17
	Reference Group	5	10.80
	Total	19	
EMOT.PST	Intervention Group	8	11.75
	Non Intervention Group	6	5.42
	Reference Group	5	12.70
	Total	19	
PRNT.PST	Intervention Group	8	9.31
	Non Intervention Group	6	11.58
	Reference Group	5	9.20
	Total	19	
ACAD.PST	Intervention Group	8	11.50
	Non Intervention Group	6	7.92
	Reference Group	5	10.10
	Total	19	
PROB.PST	Intervention Group	8	9.94
	Non Intervention Group	6	10.08
	Reference Group	5	10.00
	Total	19	
APER.PST	Intervention Group	8	10.19

	Non Intervention Group	6	7.92
	Reference Group	5	12.20
	Total	19	
SSEX.PST	Intervention Group	8	10.31
	Non Intervention Group	6	8.25
	Reference Group	5	11.60
	Total	19	
ABLE.PST	Intervention Group	8	12.38
	Non Intervention Group	6	6.67
	Reference Group	5	10.20
	Total	19	
TOTALPRE	Intervention Group	8	11.56
	Non Intervention Group	6	7.33
	Reference Group	5	10.70
	Total	19	
TOTALPST	Intervention Group	8	11.38
	Non Intervention Group	6	7.33
	Reference Group	5	11.00
	Total	19	
DIFF	Intervention Group	8	10.81
	Non Intervention Group	6	7.67
	Reference Group	5	11.50
	Total	19	

	MATH.PRE	RELG.PRE	GEN.PRE	HNST.PRE	OPSEXPRE	VERB.PRE	EMOT.PRE	PRNT.PRE	ACAD.PRE	PROB.PRE	APER.PRE	SSEX.PRE	ABLE.PRE	MATH.PST	RELG.PST	GEN.PST	HNST.PST	OPSEXPOST	VERB.PST	EMOT.PST	PRNT.PST	ACAD.PST	PROB.PST	APER.PST	SSEX.PST	ABLE.PST	TOTALPRE	TOTALPST	DIFF	
Chi-Squ	3.357	.291	1.002	1.033	1.652	.260	3.382	1.399	.702	.177	2.167	1.756	1.482	2.881	.326	5.238	.547	2.232	.934	5.921	.697	1.397	.002	1.608	1.017	3.565	2.043	1.983	1.555	
df	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Asymp. Sig.	.187	.864	.606	.597	.438	.878	.184	.497	.704	.915	.338	.416	.477	.237	.850	.073	.761	.328	.627	.052	.706	.497	.999	.448	.601	.168	.360	.371	.460	

a Kruskal Wallis Test

b Grouping Variable: GROUP