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Effectiveness of Participation in a Leisure Education Program on Knowledge of Aspects of Community Reintegration for Individuals Who Have Recently Sustained Spinal Cord Injuries

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EFFECTIVENESS OF PARTICIPATION IN A LEISURE EDUCATION PROGRAM
ON KNOWLEDGE OF ASPECTS OF COMMUNITY REINTEGRATION
FOR INDIVIDUALS WHO HAVE RECENTLY SUSTAINED
SPINAL CORD INJURIES

A Thesis
Presented to
the Graduate School of
Clemson University

In Partial Fulfillment
of the Requirements for the Degree
Master of Science
Parks, Recreation and Tourism Management

by
Stephanie Brooke Marsden
May 2010

Accepted by:
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ABSTRACT

According to the National Spinal Cord Injury Statistical Center (NSCISC), there are approximately 12,000 individuals who sustain a spinal cord injury (SCI) every year (NSCISC, 2009). The purpose of this study was to examine effectiveness of a leisure education (LE) intervention on knowledge of aspects of community reintegration for individuals who have recently sustained spinal cord injuries. The current study documents outcomes of LE programming for individuals with SCI receiving treatment at a large rehabilitation hospital located in a large city in the southeastern United States. The Leisure Competence Measure (LCM) was utilized to assess participant's leisure awareness and leisure attitudes before and after completing the LE intervention. Scores on the leisure awareness and leisure attitude subscales of the LCM were coupled with data collected through semi-structured interviews with each study participant and information gathered through agency specific LE pre/post test. Overall, participants in this research demonstrated positive change in their leisure related knowledge, awareness and attitudes through participation in LE interventions.

DEDICATION

This thesis is dedicated to all the people who kept me (somewhat) sane throughout this process: my mother, Cody, Jordan, Joy and the countless others. Most of all this thesis is dedicated to my father. Daddy, I will never forget how proud you always were of me, even when I was constantly changing my mind about my future. You were always there to be the first line of support for me no matter how unsure of things I was. I constantly hear your words of encouragement and it was really those words alone that got me through this effort. You always told me to follow my dreams and because of you this is one dream that I can always look back on and know that I realized. Live, Laugh, Love.

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CHAPTER ONE

INTRODUCTION

According to the National Spinal Cord Injury Statistical Center (NSCISC), there are approximately 12,000 individuals who sustain a spinal cord injury (SCI) every year (NSCISC, 2009). Currently, there are 259,000 Americans living with a SCI (NSCISC, 2009). Approximately 89% of these individuals will participate in a period of inpatient rehabilitation with an ultimate goal of successful reintegration into the community, home, work and leisure (Charlifue & Gerhart, 2004). Rehabilitation programs have continued to evolve and have expanded the research and treatment options for SCI.

Characteristics and Treatment of Spinal Cord Injury

Of the 12,000 individuals who sustain SCI, 56% of new injuries are experienced by individuals who are between the ages of 16 and 30. SCI is most commonly caused by motor vehicle accidents, falls, acts of violence and recreational sports activities (Sekhon & Fehlings, 2001). Due to the nature of its origin, SCI often occurs suddenly and results in physical, emotional and socio-economic losses (Forchheimer & Tate, 2004). While symptoms of SCI vary depending on the location and completeness of the injury, SCI is often associated with physical and functional deficits such as motor and sensory deficits and/or bowel and bladder dysfunction (Forchheimer & Tate, 2004).

Generally, SCI can cause permanent disability or loss of movement, (i.e. paralysis) and loss of sensation below the site of injury on the spinal cord. The effects of SCI vary depending on the location and nature of the injury (Wilson, Hasler, Dall & Granat, 2008). SCI can be seen in a variety of types including quadriplegia, tetraplegia

and paraplegia. If an individual sustains a quadriplegic or tetraplegic SCI, they will have partial or total loss of the use of all their limbs and torso (Zejlik, 1992; Institute of Medicine of National Academics, 2005; The Mayo Clinic, 2009). If an individual sustains a paraplegic SCI, their injury will only affect the lower body; specifically areas of the body below the injury site (The Mayo Clinic, 2009).

Up until the 1940s, SCI was essentially fatal. If the injury itself did not prove fatal, then the complications became fatal (Kreutz, 2004). Today, although there no known means to reverse damage to the spinal cord, advances in medicine and scientific knowledge are promoting decreases in the mortality rate for individuals with SCI. Treatment for SCI focuses on preventing further injury and enabling individuals with a SCI to return to an active and productive life within the limits of their disability (The Mayo Clinic, 2009). Individuals with a newly sustained SCI will undergo a series of treatment that include emergency attention immediately after the injury is sustained and later ongoing care through rehabilitation.

Emergency treatment of SCI focuses on maintaining life functions such as breathing and stabilizing blood pressure and avoiding possible other health complications. At this stage of SCI, individuals are often admitted to the intensive care unit of typical medical care centers or are transferred to a medical center that specializes in traumatic neurological treatment. Early stages of treatment can include medication to reduce nerve damage and inflammation near the injury site, immobilization of the individual to prevent further injury, as well as potential surgical interventions to stabilize

the spine or to remove bones or foreign objects that may be compressing the spine (The Mayo Clinic, 2009).

Due to its complex effects on numerous aspects of an individual's life, SCI cannot be treated by one single therapy. Therefore, following emergency treatment and acute care, individuals with SCI often receive multi-disciplinary treatment including physical, occupational, speech and vocational therapy and therapeutic recreation. Ultimately, the goal of rehabilitation is to empower individuals to reintegrate back into the community (Charlifue & Gerhart, 2004) and gain knowledge and skills to pursue meaningful leisure and vocational pursuits.

Therapeutic Recreation

Therapeutic Recreation (TR) is a service that uses various modalities such as activity therapy, education, and recreation to promote the health and well-being of individuals with disabilities, illnesses or other acute conditions. The use of leisure and recreation is unique to TR as the profession utilizes leisure participation to contribute to individual's overall quality of life (Sylvester, Voelkl, & Ellis, 2001). TR professionals working in the rehabilitation setting use leisure to assist individuals in regaining cognitive and physical functioning and help to provide new meaning in their life after a threat to health. This is done through individual and group therapy sessions, education on adaptive equipment and adapted recreation opportunities, active recreation participation and leisure education regarding the importance of maintaining an active leisure lifestyle post injury and on the civil rights of individuals with disabilities.

SCI Research in Therapeutic Recreation

Post SCI, reintegration into vocational and non-vocational pursuits become extremely important for an individual's overall well-being and life satisfaction. While many individuals hope to reintegrate back into work, due to their injury they are not always able to do so. For these individuals, participation in leisure activities must then become an important outcome of the rehabilitation process (Schonnerr et al., 2005). The benefits of leisure (e.g. physical, emotional and social) have long been examined by researchers. However, leisure activity following SCI can be complicated due to changes in physical functioning and mobility, loss of independence, limited access to social opportunities, limited awareness of recreational equipment and of leisure's relationship with quality of life (Nichols & Brasile, 1998). Therefore, it is important that individuals receive education to increase leisure participation and community and recreational awareness after sustaining a SCI.

Previous studies have examined the effects of leisure participation following SCI. Coyle, Shank, Kinney, and Hutchins (1993) found that individuals with SCI who actively participate in leisure post injury reported higher levels of life satisfaction, higher quality of social relationships and lower levels of depression (Coyle, Shank, Kinney & Hutchins, 1993). Leisure activity post injury can increase an individual's confidence and self-determination. Nichols and Brasile (1998) reported that individuals with SCI who participated in adventure activities demonstrated increased efficacy, self-confidence, and acceptance of disability. Overall research in this area has found that leisure participation

post injury helps to prevent disease, promote health and maintain functional independence (Hansen, Forchheimer, Tate, & Luera, 1998).

Community Reintegration

Community reintegration following hospital discharge has emerged as an important goal of rehabilitation (Forchheimer & Tate, 2004; Schonherr et al., 2005). Successful reintegration back into the community is an important component for individuals with SCI to facilitate meaning and high quality of life post discharge. The concept of community reintegration extends beyond self-care and physical function to include engagement in expected vocational, social and community roles (Reistetter & Abreu, 2005; Winkler, Unsworth & Sloan, 2006).

Successful community reintegration for individuals with SCI requires many components. Community reintegration for individuals with SCI includes learning about civil rights from both a general and individual perspective, learning how to physically access places that are not adequately accessible (Apple, 1998) and ways to become a self-advocate. Effective community reintegration requires an individual to successfully negotiate many barriers that may stem from one's disability (Forchheimer & Tate, 2004). Often in rehabilitation settings that serve individuals with SCI, the TR department plays a key role in the education of these individuals on each of these areas.

Leisure Education

Leisure Education (LE) can be conducted for clients by TR or other recreation professionals and focuses on information exchange and instruction that is aimed at improving or changing participants' knowledge, attitudes and skills related to their own

leisure involvement. The skills learned in LE create options for people, thus allowing choice and a broad range of activities from which to choose (Dattilo, 1999; Dattilo, Williams, & Cory, 2003; Cory, Dattilo & Williams, 2006). LE in TR has been used in a variety of settings and with several different populations (Shank & Coyle, 2002; Ryan et al., 2008).

LE related research has intended to demonstrate that leisure participation can be enhanced through LE interventions for individuals with a variety of needs, disabilities, and illness. However, minimal research has been done that empirically validates this claim (Mahon & Searle, 1994). A majority of the LE research available has been conducted with individuals with cognitive deficits (e.g. mental retardation) (Lanagan & Dattilo, 1989; Anderson & Allen, 1985; Mahon & Bullock, 1992; Mahon, 1994; Williams & Dattilo; 1997; Dattilo & Hoge, 1999; Cory, L., 2002; Cory, L., Dattilo, J., & Williams, R., 2006) and older adults (Beckman & Mannell, 1986; Dunn & Wilhite, 1997; Hsieh, 2009; Searle et al., 1995; Searle & Mahon; 1991). Research in TR and LE identify four primary components: leisure awareness, social interaction skills, leisure activity skills, and leisure resources (Peterson & Gunn, 1984).

To successfully assist clients in gaining leisure related knowledge, attitudes and skills, LE interventions must be effective. In addition, it is important to provide TR interventions that have been shown to be effective in meeting specific needs of individuals with SCI; however, limited research exists regarding the overall effectiveness of TR inventions using LE for individuals with SCI. Therefore, this study is designed to

examine effectiveness of a LE intervention with individuals who recently sustained a SCI using the framework of the Leisure Ability Model (Peterson & Gunn, 1984).

Theoretical Framework

The Leisure Ability Model

The Leisure Ability Model (LAM) is one of the primary models used to guide TR practice. It was first proposed in 1984 by Peterson and Gunn. The LAM has contributed to the development of the field of TR and has created a guide for facilitation of services (Sylvester, 1989). The LAM takes a client centered, problem oriented approach where client's needs are identified during the initial assessment phase of service. Information gained during this period is then utilized to refer individuals to leisure programming (Sylvester, Voelkl, & Ellis, 2001). The LAM can be used with any population, in any setting and with any service (Yaffe, 1998). The LAM is considered unique among the other service models utilized within TR because of its focus on leisure as an outcome (Mobily, 1999).

The LAM is based on two overarching ideas. First, it is based on the idea that all individuals need, desire and deserve leisure (Stumbo & Peterson, 1998). Therefore, following the LAM, TR services should focus on increasing an individual's independence and satisfaction in his/her leisure functioning. In the end, an individual should possess an inclusive leisure lifestyle. A leisure lifestyle as defined by Peterson and Gunn (1984) is the day to day behavioral expression of one's leisure related attitudes, awareness, and activities. It is revealed within the context and composite of the individual's total life experience (Peterson & Gunn, 1984).

The LAM is based on the idea that many, if not all, individuals experience barriers to leisure participation that hinder the development of a complete and satisfying leisure lifestyle (Stumbo & Peterson, 1998). Leisure barriers can include, but are not limited to, a lack of leisure skills and opportunities, decreased social skills, and a negative view of leisure participation. Barriers to leisure vary by individual and result from their specific life situation. This idea of leisure barriers is particularly important for individuals with disabilities or chronic illnesses. Research has demonstrated that more frequent, severe and more permanent leisure barriers are experienced by individuals with disabilities simply because they have a disability or illness (Stumbo & Peterson, 1998).

The LAM is based on four theoretical concepts: learned helplessness versus self-determination, intrinsic motivation and locus of control, choice and flow (Mobily & Ostiguy, 2004). Individuals experience learned helplessness when they perceive that the events happening in their life are beyond their control and they do not possess the power to change them. As a result, the individual ceases trying to change any aspect of their life (Stumbo & Peterson, 1998). According to Iso-Ahola (1980), learned helplessness is a learned trait that stems from environmental encounters (Iso-Ahola, 1980). For example, if an individual is told that they are unable to participate in a specific leisure activity because of their disability, they may experience an overall loss of competence and then perceive themselves to be incompetent in all areas of their life. In this example, learned helplessness began as a specific instance and was spread to a generalized sense that begins to govern all areas of the individual's life. If an individual experiences learned helplessness in leisure, they are at risk of generalizing this experience to all leisure

participation. Thus, their entire leisure lifestyle is put in jeopardy (Stumbo & Peterson, 1998). According to Seligman, if an individual experiences severe learned helplessness it can be seen through three characteristics: decreased motivation, inability to foresee success and increased emotionality.

A TR specialist can help clients negotiate the effects of learned helplessness by facilitating experiences for individuals to increase their sense of control. Through participating in a variety of leisure activities, individuals can come to the realization that they have the ability to meet their goals and overcome challenges. When individuals experience success through leisure participation, they can become more motivated to continue to participate and can potentially increase their intrinsic motivation. Thus individuals participate in activities because they have desire to do so and not because they receive external motivators such as monetary compensation. Deci and Ryan (1985) concluded that intrinsically motivated activity energizes behavior and results in feelings of self-determination. A person who is intrinsically motivated is more likely to learn, to adapt and to develop competencies that contribute to well-being (Mobily & Ostiguy, 2004). Having intrinsic motivation is related to possessing an internal locus of control.

An internal locus of control can promote individuals in depressing feelings of learned helplessness. Internal locus of control is seen when individuals believes that they are responsible for the outcomes and events in their own life. Similarly, an individual with an internal locus of control is motivated to continue to seek challenges (Sylvester, Voelkl, & Ellis, 2001). Thus, if an individual has an internal locus of control, they are more likely to continue in leisure activities that they feel are meaningful.

The third theoretical framework that supports the LAM is choice. An individual has the ability to make a choice during leisure if they possess the skills, knowledge and attitudes that motivate them to seek out options and make appropriate choices (Stumbo & Peterson, 1998). A TR specialist can promote individuals' skill development in choice-making by providing a variety of options for individuals in which to participate rather than making the choice for them. Through the development of preferences, individuals can discover new and meaningful leisure activities that can be carried over into their leisure lifestyle.

Lastly, Flow creates the fourth theoretical framework for the LAM. In 1990, Csikszentmihalyi proposed the concept of Flow. Flow is experienced when an individual's skill level is matched with the challenges presented by an activity (Csikszentmihalyi, 1990). Flow includes feeling deeply absorbed in an activity, a loss of a sense of time, a merging action and awareness and a focus of effort on the task at hand (Mobily & Ostiguy, 2004). For TR services to promote flow, client's skill level must be accurately assessed and reassessed as the individual acquires new skills. When the match between skill level and activity challenge is met, individuals are more likely to learn and experience satisfying leisure. Thus, it is the job of the TR specialist to provide individuals with choice, teach leisure related skills and abilities and to match the individual's skill to the challenge presented within the activity (Stumbo & Peterson, 1998). TR specialists can aid individuals in decreasing perceived leisure barriers.

Because they are at an increased risk for encountering leisure barriers, individuals with disabilities may benefit from the assistance of a TR specialist. The TR

specialist can aid the individual in eliminating, decreasing, overcoming, or developing compensatory strategies for their perceived leisure barriers. Using the LAM, a TR specialist accomplishes this through the three components of the LAM: treatment or functional improvement, leisure education and recreation participation services (Stumbo & Peterson, 1998). Within the LAM, each component has a specific purpose and roles of the TR specialist and specific outcomes for the client. The components of the LAM are in sequence and progress from highest therapist control and lowest client control to lowest therapist control and highest client control (Bullock, 1998). Services offered within the LAM are along a continuum. Clients enter the continuum where they are qualified to receive treatment (Mobily, 1999). In the end, all components combine to lead a client to an independent and full leisure lifestyle.

Functional Improvement

The LAM assumes that adequate functioning in the physical, social, cognitive and affective domains is a requirement for an independent leisure lifestyle (Mobily & Ostiguy, 2004). Using the components of the LAM, a TR specialist can decrease these leisure barriers, beginning with the use of functional improvement. Previously termed “treatment services” (Yaffe, 1998), *functional improvement* in TR services focuses on the functional domains of physical, mental, emotional and social. The goal of functional improvement is to improve or teach compensatory strategies for a client’s functional ability in these areas (Stumbo & Peterson, 1998). Improvement in these areas will thus allow an individual increased engagement in leisure. During this stage of the LAM, TR services aimed at increasing functional improvement are guided by the TR specialist.

Clients within this stage are given less control and freedom of choice (Sylvester, Voelkl, & Ellis, 2001) and the TR specialist has more control over many aspects of the intervention.

Leisure Education

Leisure Education (LE) within the LAM is a broad category of services that focuses on the development and acquisition of various leisure-related skills, attitudes, and knowledge (Peterson & Gunn, 1984). LE is based on a model of self-determination through which an individual may establish what they need through leisure experiences in his/her life (Bullock & Mahon, 1997; Mundy & Odum, 1979). For some individuals, LE will be a relearning process, where they rediscover pre-morbid leisure interests and skills and are provided with compensatory strategies for increased independence as needed. For others, participation in LE will challenge them to use skills they have not used in leisure previously. In other cases, LE will teach individuals completely novel ideas and skills (Stumbo & Peterson, 1998). The goal of LE is to aid individuals in becoming independent in their all aspects of their leisure participation. During LE, the TR specialist fills the role of instructor, facilitator and counselor. Clients participating in LE begin to take on a more active role and are responsible for learning and the later use of knowledge (Sylvester, Voelkl & Ellis, 2001).

Peterson and Gunn (1984) identified four major subcomponents of LE content: leisure awareness, social interaction skills, leisure activity skills, and leisure resources (Peterson & Gunn, 1984). These components have be identified as areas that are required to completely understand and appreciate the importance and need for leisure (Peterson &

Stumbo, 1998). Each subcomponent can be taught separately or combined. After receiving LE interventions, an individual should gain leisure related knowledge and should possess the skills to make an informed and independent choice regarding their leisure participation (Mobily & Ostiguy, 2004).

Leisure Awareness

Leisure awareness is defined as the basic knowledge that includes cognitive understanding of leisure and its benefits, having a positive attitude toward leisure participation, decision making skills and knowledge of and the ability to utilize leisure activities (Peterson & Gunn, 1984). During this subcomponent of LE, individuals are educated on the importance of maintaining a safe and active leisure lifestyle and the overall benefits (e.g. physical, emotional, social) of leisure participation. Leisure awareness also focuses on assisting individuals in gaining an awareness of self in leisure.

Social Interaction Skills

Social interaction skills includes the skills that are needed for interaction with one other individual (dual), a few other individuals (small group) and many other individuals (large group) (Stumbo & Peterson, 1998). These skills include etiquette, and communication, relationship-building, empathy and self-presentation skills (Sylvester, Voelkl & Ellis, 2001; Stumbo & Peterson, 1998). As leisure is largely social in nature, these skills are essential for an individual to be able to fully function in leisure participation.

Leisure Activity Skills

During this section of LE, individuals receive education regarding traditional and non-traditional leisure tasks. Traditional leisure activities include bowling, basketball and swimming. Examples of non-traditional leisure activities are computer or video games, social networking websites such as MySpace or Facebook and pet care. The goal of this subcomponent is to provide individuals with a diverse leisure repertoire from which to find meaning and fulfillment. Leisure activity skills will vary by individual and should be related to their specific age, culture, preferences and lifestyle (Stumbo & Peterson, 1998).

Leisure Resources

Leisure resources are connected to the opportunities that are available to an individual. The goal of this section is to teach individuals new resources and give them the knowledge of how to utilize the resources during future leisure involvement. Resources include activity opportunities and personal, family/home, community and state and national resources (Sylvester, Voelkl & Ellis, 2001).

Recreation Participation

As the last component of the LAM, recreation participation allows individuals to practice all knowledge and skills gained through functional improvement and leisure education. Individuals can also explore new avenues for leisure and relearn pre-morbid activities. During recreation participation, individuals actively engage in leisure activities. Because of this, recreation participation offers opportunity for choice and interaction (Mobily & Ostiguy, 2004). Recreation participation can also provide individuals with an opportunity to rest and relax after other treatment services (Yaffe, 1998). During this

stage, clients have increased control and the TR specialist takes on the role of supervisor (Sylvester, Voelkl & Ellis, 2001). Through recreation participation, clients gain an increased ability to take responsibility for their own leisure participation. Individuals also gain an increased ability to make and follow through with leisure related decisions. Recreation participation increases an individual's sense of leisure related competence and their overall sense of mastery (Peterson & Gunn, 1998).

LAM and SCI

As leisure is an important part of an individual's life prior to an injury, it should be utilized as a key component during adjustment caused by a significant trauma such as sustaining a SCI. Leisure participation can be used post SCI to aid individuals in finding meaning and reclaiming their identity (Lee et. al, 1993; Lee et. al, 1996). Active participation in leisure becomes extremely important post SCI because research has demonstrated that the percentage of individuals with SCI who return to meaningful employment is low (Coyle & Kinney, 1990; Lee, 1996). During rehabilitation for SCI, focus should be placed on individual's ability, success and what they can do rather than focusing on what they can no longer do (Lee et al., 1993).

A TR specialist can utilize the LAM for individuals who have recently sustained a SCI to increase the individual's understanding of their disability and increase their ability to obtain a satisfying leisure lifestyle post discharge. Functional improvement can focus on activities that increase endurance, strength and an individual's sitting and or standing tolerance. A TR specialist can use LE to increase an individual's self-awareness in their new situation and assist them in relearning and or adapting pre-injury leisure skills. LE

can be used to educate individuals with SCI on the location and utilization of leisure resources and a variety of accessibility options. Lastly, recreation participation can be used to provide individuals with a variety of opportunities to participate in novel and adapted leisure in a controlled environment (Stumbo & Peterson, 1998).

Importance of Study

Several studies have documented the importance of leisure participation and its role post SCI (Coyle, Shank, Kinney & Hutchins, 1993; Hansen, Forchheimer, Tate, & Luera, 1998; & Nichols & Brasile, 1998). However, after SCI, it may not be a priority for individuals to regain an active leisure lifestyle. LE can be used to increase leisure participation post-injury and research has shown that LE was effective in increasing participants' leisure awareness, self-determination, life satisfaction, acceptance of disability and decreasing depression levels (Coyle, Shank, Kinney & Hutchins, 1993; Hansen, Forchheimer, Tate, & Luera, 1998; & Nichols & Brasile, 1998). LE programming can create a link for its participants between injury, health and leisure participation.

Statement of Purpose

The purpose of this study is to examine effectiveness of a LE intervention on knowledge of aspects of community reintegration and the relevance of leisure participation for individuals who have recently sustained spinal cord injuries.

The current study documents outcomes of LE programming for individuals with SCI receiving treatment at a large rehabilitation hospital located in a metropolitan city in the southeastern United States. The current research examined the following research questions:

Research Questions

1. Does participation in a LE intervention for individuals with SCI change participants' leisure awareness as measured by the leisure awareness subscale of the Leisure Competence Measure?
2. Does participation in a LE intervention for individuals with SCI change participants' leisure attitudes as measured by the leisure attitudes subscale of the Leisure Competence Measure?
3. Does participation in a LE intervention for individuals with SCI change participants' knowledge about the ADA and relevance of leisure in their lives?

Definitions of Terms

- Spinal Cord Injury (SCI)- occurs when a traumatic event results in damage to cells within the spinal cord or severs the nerve tracts that relay signals up and down the spinal cord. SCI can be classified as either complete or incomplete. It can be further classified as tetraplegia or paraplegia (Zejdlik, 1992; Institute of Medicine of National Academics, 2005; The Mayo Clinic, 2009).
 - Complete SCI- Individual has no function, sensation or voluntary movement below the level of injury and both sides of the body are equally affected (Zejdlik, 1992; Institute of Medicine of National Academics, 2005; The Mayo Clinic, 2009).
 - Incomplete SCI- Individual has some functioning below the primary level of the injury. The individual may have more functioning on one side of the body than other (Zejdlik, 1992; Institute of Medicine of National Academics, 2005; The Mayo Clinic, 2009).
 - Tetraplegia- Injury to the spinal cord in the cervical region with associated loss of muscle strength in all four extremities (Zejdlik, 1992; Institute of Medicine of National Academics, 2005; The Mayo Clinic, 2009).
 - Paraplegia- Injury to the spinal cord in the thoracic, lumbar, or sacral segments (Zejdlik, 1992; Institute of Medicine of National Academics, 2005; The Mayo Clinic, 2009).
- Community Reintegration- Interventions that assist clients with returning to the community following treatment for a medical or behavioral health issue. These

interventions typically include learning functional skills needed to interact with one's physical and social environment and activities that allow clients to apply these functional behaviors in natural community settings (Shank & Coyle, 2002).

- Therapeutic Recreation- A profession that uses treatment, education, and recreation services to help people with illnesses, disabilities, and other conditions to develop and use their leisure in ways that enhance their health, independence and well-being. It is practiced in clinical, residential and community settings (NTRS, 1995, p.1)
- Leisure Education- A broad category of services that focuses on the development and acquisition of various leisure-related skills, attitudes, and knowledge (Peterson & Gunn, 1984). LE is made of four major components: leisure awareness, social intention skills, leisure resources, and leisure activity skills (Peterson & Gunn, 1984).
- Leisure Awareness - Basic knowledge that includes cognitive understanding of leisure and its benefits, having a positive attitude toward leisure participation, decision making skills and knowledge of and the ability to utilize leisure activities (Peterson & Gunn, 1984).
- Leisure Attitude- An individual's feeling towards the benefits of leisure, the importance of leisure participation and leisure itself (Peterson & Gunn, 1984).
- Leisure Resources – Resources available to an individual through activities opportunities and personal, family and home-based resources that allow them to actively participate in leisure and recreation (Sylvester, Voelkl, & Ellis, 2001.)

- Americans with Disabilities Act (ADA)- A federal law that was enacted in July 1990 that protects the rights of individuals with disabilities in the areas of employment, government, transportation, public places and telecommunication.

CHAPTER TWO

LITERATURE REVIEW

Introduction

Advances in medicine and scientific knowledge promote decreases in the mortality rate for individuals who sustain SCI. In addition, advances in technology have improved some aspects of the lives of individuals with SCI; however, while more individuals are surviving the initial phase of injury and have access to advanced technology, it does not necessarily mean they are living healthier and more meaningful lives (Thompson & Gustafson, 1996).

When provided alongside other allied health therapies, TR has been shown to be an effective form of treatment for individuals with SCI. LE offered as a part of TR services can be used to educate individuals with SCI on the benefits of leisure participation, aspects of community reintegration and the civil rights of individuals with disabilities. It is important to examine effectiveness of these programs to ensure that the information provided is relevant, useful and utilized by individuals with SCI post discharge to promote community reintegration.

Spinal Cord Injury

The spinal cord is an elongated portion of the central nervous system (CNS) that connects the brain to all the muscles of the body. It travels within the vertebral canal of the spine and is vital for conveying and integrating sensory and motor information between the brain and somatic and visceral structures (Institute of Medicine of National Academics, 2005). The spinal cord is made up of nerve tracts that carry signals back and

forth between the brain and the rest of the body. Therefore, an injury to the spinal cord affects the three major bodily systems: the nervous, immune and the vascular system. (Institute of Medicine of National Academics, 2005). Depending on the severity of the injury, a SCI can prevent the transmission of all or some neural messages across the site of the injury (De Vivo, Krause, & Lammertse, 1999). As a result of an injury, messages pertaining to an individual's movement, feeling, breathing, temperature, blood pressure and bowel and bladder control can be blocked (The Shepherd Center, 2009).

The level and severity of a SCI dictate its functional impact and prognosis (Institute of Medicine of National Academics, 2005). Symptoms of a spinal cord injury or SCI vary depending on the location and completeness of an injury. A complete injury relies on the absence of any neurological function below the site of the injury (Levi, 2004). If an individual has an incomplete injury, the spinal cord has only been partially damaged. These individuals may have some feeling or movement remains below the level of injury (Institute of Medicine of National Academics, 2005). However, it is important to remember that the level of completeness or incompleteness varies from individual to individual (The Mayo Clinic, 2009).

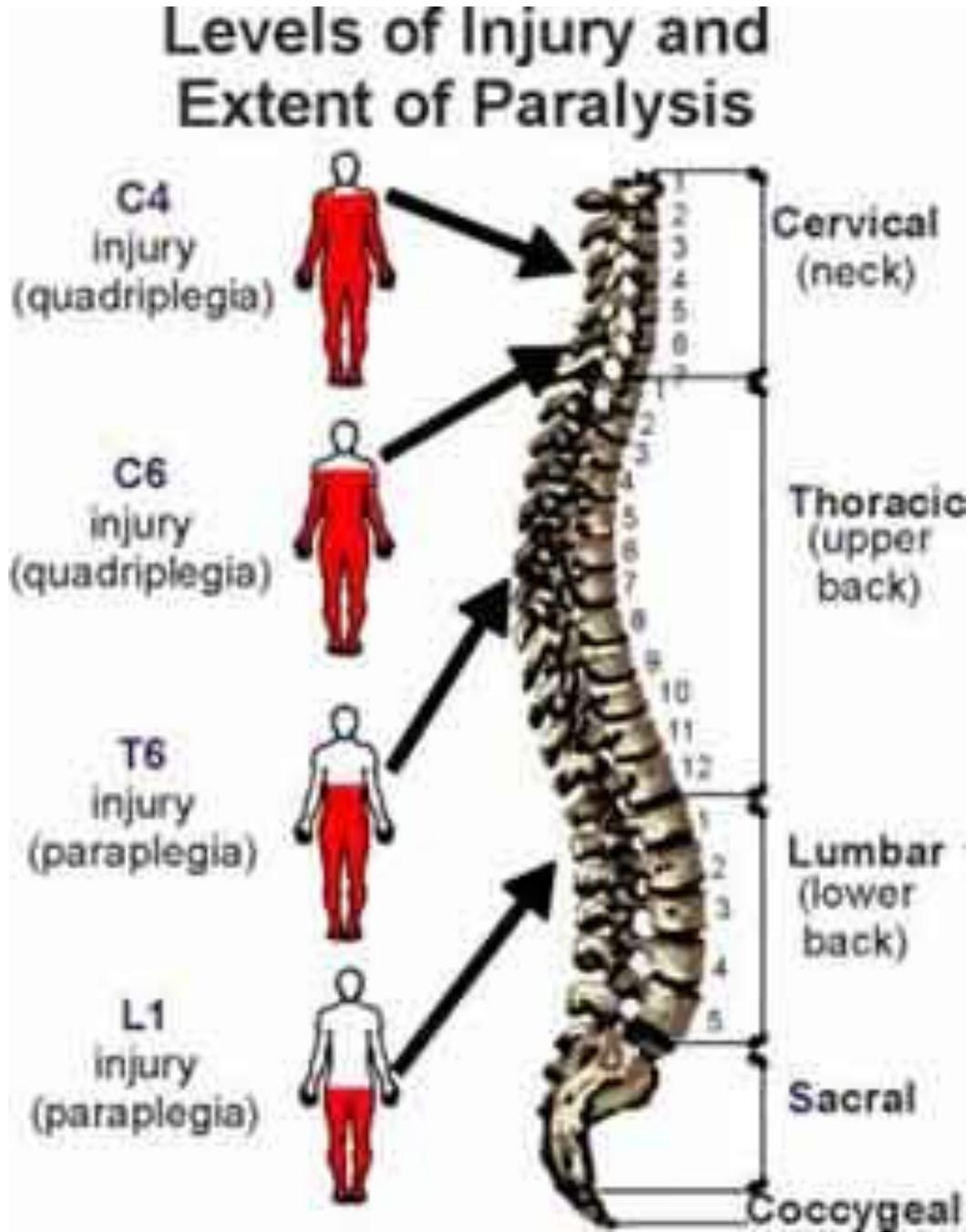
The spinal cord is divided into four sections: cervical, thoracic, lumbar and sacral (Institute of Medicine of National Academics, 2005). In general, SCI are referenced by the location and number of spinal nerves affected. For the example, if an individual sustains an injury in the neck area, it is known as a cervical injury. Over 55% of all SCI are cervical (De Vivo, Krause, & Lammertse, 1999). There are eight spinal nerves within the neck area; thus they are numbered 1-8. Therefore, if an individual is noted to be a C-5

the individual's injury is in their neck with their fifth spinal nerve being affected. A cervical injury results in tetraplegia/quadriplegia with limited movement and feeling below the shoulders and neck (Institute of Medicine of National Academics, 2005).

There are twelve pairs of spinal nerves in the thoracic area, numbered 1-12. Therefore, if an individual is said to be a T-6, the injury is in their thoracic area with their sixth spinal nerve being affected. Injuries in this area result in paraplegia where an individual has limited or no feeling or movement in the chest and below (Institute of Medicine of National Academics, 2005).

Within the lumbar area of the body, there are five spinal nerves. Similarly, there are also five spinal nerves in the sacral area of the body. Injuries in these areas would be noted with an "L" for lumbar or "S" for sacral. Injury level would be noted by the number of the spinal nerve affected by the injury. An outline of the spine and the levels of injury can be seen below in Figure 1.

Figure 1: Levels of Injury and Extent of Paralysis



Treatment of Spinal Cord Injuries

Treatment of SCI has focused traditionally on the physical aspects of the injury. In recent years, medical professionals have realized the importance of holistic treatment that focuses on the individual as a whole and treating not only the physical injury, but treating the individual on emotional, social, and leisure based levels. Treatment of a SCI begins at the scene of the injury, advances to treatment at a trauma center and often ends with specialized treatment at a rehabilitation center (Institute of Medicine of National Academics, 2005).

At the scene of the injury, the goals of any treatment or care are often to stabilize the spine and rapidly transport the individual to a trauma center. These goals are essential for the prevention of further injury (Zejdlik, 1992; Institute of Medicine of National Academics, 2005). Once at a trauma center, an individual will often receive a variety of treatments that can include medication to reduce nerve damage and inflammation near the injury site and potential surgical interventions to stabilize the spine or to remove bones or foreign objects that may be compressing the spine (Zejdlik, 1992; The Mayo Clinic, 2009). Early surgery can alleviate pressure and improve circulation of blood and cerebrospinal fluid (Institute of Medicine of National Academics, 2005). Other early treatment interventions for SCI focus on spasticity relief, bladder and bowel dysfunction, prevention of potentially fatal deep vein thromboses, and pressure ulcers.

Once individuals with SCI are stabilized and moved to later treatment facilities, the focus of treatment moves from the primary disability to the secondary disabilities. Treatment of secondary disabilities can focus on sexual dysfunction, depression, and

leisure and community integration (Institute of Medicine of National Academics, 2005). Due to its complex effects on numerous aspects of an individual's life, SCI cannot be treated by one single therapy. Therefore, TR, as an allied health profession, is an important aspect of an individual's rehabilitation process that can provide LE to increase leisure based knowledge, awareness and attitudes.

Leisure Education

According to Stiens et. al (2002), reintegration into the community and into leisure participation promotes an individual's fullest inclusion and participation within the physical and psychological environment. For individuals with SCI, reintegration includes re-establishing previously existing roles and relationships (Dijkers, 1998) and negotiating barriers that their disability can create. After incurring a SCI, individuals face challenges adapting not only to the physical aspect of the injury, but to the changes it can bring to their living situation, lifestyle, relationships and various facets of adjustment (Charlifue & Gerhart, 2004). Individuals who sustain a SCI must learn new ways to perform basic functions including self care, mobility, leisure participation and community involvement.

Although development of an active leisure lifestyle may not be a primary goal immediately post injury, quality of life following SCI may be lessened if there is not potential for continuing pre-injury interests or if there is limited knowledge and skills to find other pastimes that can be adapted (Tasiemski, Kennedy & Gardner, 2006).

Although goals of rehabilitation identified by the treatment team may have traditionally focused on physical performance and basic activities of daily living, participation in

activities and roles within the home and community can be more representative of the goals of the individual (Brown et al., 2004). Based on this, TR Specialists working in rehabilitation facilities can use LE interventions to assist individuals with SCI return to leisure participation and to educate them about the resources available to them in their communities.

Evidence exists that participation in meaningful, interesting and emotionally expressive activities is important to emotional, cognitive and social health and well-being (Caldwell, 2005). However, while many individuals are aware of the benefits of leisure participation, there exists a negative relationship between participating in leisure (e.g. taking time for ones-self) and keeping pace in a busy, modern society. A bias is often created that connects leisure, relaxation and down time with a lack of individual productivity and an overall sense of being unworthy (Caldwell, 2005; Kleiber, 1999).

It is important that individuals understand what leisure is and how leisure may have a positive impact on one's lifestyle (Janssen, 2004). Leisure participation and appreciation can be beneficial and can become an outlet for expression following SCI and can assist individuals in regaining a sense of control, independence and meaning. LE is based on a model of self-determination through which an individual may establish what they need through leisure experiences in his/her life (Bullock & Mahon, 1997; Mundy & Odum, 1979). Historically, LE has its base in the progressive education reform that took place in the twentieth century. For the TR profession, Mundy and Odum's text on LE (1979) become one of the first strong influences within the field (Shank & Coyle, 2002).

LE has been defined by a number of researchers including Mundy and Odum (1979), Peterson and Gunn (1984), Zeyen et al. (1977) and Brannon, Chinn & Verhoven (1981). According to Mundy and Odum (1979), LE is a total developmental processes through which individuals develop an understanding of self, leisure, and the relationship of leisure to their own lifestyles and society. Zeyen et al. (1977) define LE as a process where individuals recognize the use of leisure for personal satisfaction and enrichment, gain knowledge of available leisure opportunities and are able to make leisure related decisions independently. Similarly, Brannon, Chinn and Verhoven (1981) stated that LE is designed to educate individuals regarding the wholesome use of discretionary time in order to enhance their quality of life. Lastly, Peterson and Gunn (1984) define LE as a broad category of services that focus on the development and acquisition of various leisure-related skills, attitudes, and knowledge. For the purposes of this study, Peterson and Gunn's definition of LE will be utilized.

Peterson and Gunn (1984) identified four major components of LE content: leisure awareness, social intention skills, leisure resources, and leisure activity skills (Peterson & Gunn, 1984). While each of these components have value, this research study will focus on leisure awareness and leisure resources. For the purposes of this research leisure awareness will be defined as basic knowledge that includes cognitive understanding of leisure and its benefits, having a positive attitude toward leisure participation, decision making skills and knowledge of and the ability to utilize leisure activities. Leisure resources will be considered any resource that increases an individual's ability to actively participate in leisure opportunities. Resources can include: activity

opportunities and person, family, community and state/national resources. (Peterson & Gunn, 1984).

While LE has many definitions, many of the LE interventions that have been developed have common elements. Some of the most common elements in LE include leisure appreciation, self-awareness in leisure, leisure-related decision making, leisure activity, community and social skills and leisure resources (Shank & Coyle, 2002). LE can be utilized to address the challenges to a successful and meaningful leisure lifestyle that are often faced by individuals with disabilities. The skills gained through LE help to create options for individuals who are therefore allowed choice and self-determination and therefore have an increased chance in experiencing independence through leisure participation (Datillo, 1999; Shank & Coyle, 2002).

Even as research on the effectiveness of LE interventions is expanding, overall it is still extremely limited. However, much of the current research shows positive benefits from participation in LE interventions. Much of the research conducted has been conducted on older adults (Backman & Mannell, 1986; Dunn & Wilhite, 1997; Searle et al., 1995; Searle & Mahon, 1991), individuals with cognitive impairments (Lanagan & Datillo, 1989; Anderson & Allen, 1985; Zoerink & Lauener, 1991) and young adults with physical impairments (Bullock & Howe, 1991).

Research on the outcomes of LE interventions for older adults has found several benefits of participation for these individuals. Backman and Mannell (1986) compared a program addressing activity skills to a LE intervention addressing attitudes towards new activities on forty individuals who were residing in a facility for older adults. Results of

their study showed that LE increased individual's positive attitude toward leisure which in turn lead to increased levels of satisfaction from participation in activities (Backman & Mannell, 1986). Similarly, Dunn and Wilhite (1997) found that participation in LE led to increased frequency and duration of leisure engagement in older adults. Research has demonstrated that LE interventions can help reduce leisure boredom for elderly adults living in a residential facility (Seale et al., 1995). Overall, LE interventions have been found to contribute to an individual's ability to live and function in leisure with increasing independence (Searle & Mahon, 1991).

Similar to the outcomes of the LE research conducted with older adults, research on the outcomes of LE with individuals with cognitive deficits such as mental retardation has yielded positive results. LE has been found to increase the frequency of leisure participation in this specific population (Lanagan & Dattilo, 1989; Anderson & Allen, 1985). Participation in LE interventions has also been found to increase individuals with cognitive deficits' abilities to make leisure related decisions (Mahon & Bullock, 1992). Lastly, LE has been found to increase self-determination in leisure and increase an individual with cognitive deficits' affect (Williams & Dattilo, 1997; Dattilo & Hoge, 1999). In addition, research on LE interventions has found that LE can positively affect the well-being of children and adults (Mahon & Searle, 1994). McDonald and Howe (1989) conducting LE interventions with thirty-eight child abuse victims. Results of their study found that LE significantly enhanced the participant's self-concept.

While the research discussed above yielded positive results, some studies have found no significant changes to their participants after LE interventions (Aguilar, 1987;

Caldwell, Adolph & Gilbert, 1989; Munson, Baker & Lundgren, 1985; Muson, 1988; Zoerink, 1988). Even with this in mind, research has provided evidence that LE can be utilized to increase independence and appropriate leisure expression in individuals with a variety of needs, disabilities and illnesses (Shank & Coyle, 2002). It is important that research continue to examine the effectiveness of LE interventions and continue to examine its affect on specific populations.

Summary

It is important that individuals understand the meaning of leisure and how participation can have a positive impact on their life (Janssen, 2004). As medical advances continue to decrease the mortality rate for individuals post SCI (Thompson & Gustafson, 1996), allied health professionals must work to ensure that these individuals continue to lead healthy and meaningful lives. Leisure participation post SCI can become critical in enhancing this process (Coyle, Shank, Kinney & Huthcins, 1993; Hansen, Forchheimer, Tate, & Luera, 1998; & Nicholas & Brasile, 1998.) However, the development of an active leisure lifestyle may not be a primary goal post injury. TR professionals working with individuals with SCI in rehabilitation settings can bridge the gap between leisure and life after discharge and thus aid individuals in gaining an outlet for expression, a sense of control, independence and meaning. By utilizing LE interventions, TR professionals can educate individuals with SCI on the benefits of leisure participation, aspects of community reintegration and the civil rights of individuals with disabilities. Using the model of LE established by Peterson and Gunn (1984), content of interventions examines leisure awareness, social intention skills,

leisure resources, and leisure activity skills (Peterson & Gunn, 1984). While research in this area has demonstrated that LE can lead to increased frequency and duration of leisure engagement (Dunn & Wilhite, 1997; Lanagan & Dattilo, 1989; Anderson & Allen, 1985), increased levels of satisfaction during leisure participation (Backman & Mannell, 1986), an increased feeling of self-determination in leisure (Williams & Dattilo, 1997; Dattilo & Hoge, 1999), and an overall increased ability for an individual to live and function in leisure independently (Searle & Mahon, 1991), studies must continue to document the outcomes and effectiveness of such interventions.

CHAPTER THREE

METHODS AND PROCEDURES

Introduction

Data used for this research were gathered during the winter of 2010. The purpose of this study is to examine effectiveness of a LE intervention on knowledge of aspects of community reintegration and the relevance of leisure participation for individuals who have recently sustained spinal cord injuries. This chapter describes the research design, setting and participants, procedures, instrumentation and proposed method of data analysis.

Approval of Protocol Involving Human Subjects

A protocol involving human subjects was submitted to the Clemson University Institutional Review Board and was approved.

Research Design

This pre-experimental design employed a single-group pretest-posttest technique. This research technique involved three steps: (1) administering a pre-test designed to measure a specific dependent variable, (2) participants completing a specific intervention and (3) administering a post-test designed to measure a specific dependent variable. For this study, there were two dependent variables: leisure attitude and leisure awareness. Differences attributed to the intervention were then evaluated by comparing the change between the pre and post-tests. The major limitation of research utilizing this design is that because there is no control group, the experimenter cannot assume that the change between pre and post-testing is brought about by the intervention. For this study there

was no control group. All individuals with SCI receiving treatment at the facility complete the LE interventions. Therefore, it would be unethical for the researcher to withhold treatment important to an individual's recovery for the purposes of creating a control group. Thus, for the purposes of this study, participants served as their own controls. To enhance understanding of responses from the subscales of the LCM, semi-structured interviews were conducted.

Description of Setting

The large southeastern rehabilitation hospital is a private, not-for-profit hospital that provides medical care and rehabilitation for individuals with spinal cord injury and disease, acquired and traumatic brain injury, multiple sclerosis and other neuromuscular problems. It is a 120-bed facility that includes a 10-bed intensive care unit and a 30-bed acquired brain injury unit. The hospital provides a full range of rehabilitation services including: intensive care, medical/surgical care, inpatient and outpatient rehabilitation, and day programs for spinal cord and brain injury and outpatient clinics.

Leisure Education Interventions/Classes

LE interventions for this study were delivered through two different LE classes. Topics addressed in LE classes include (a) benefits of leisure participation and (b) the Americans with Disabilities Act (ADA). Classes were offered once per week and each study participant attended once in each of the series of two classes. Classes were taught by a Certified Therapeutic Recreation Specialist (CTRS) in a classroom specifically set aside for the class. LE classes are taught in a week rotation for the therapists; the same

therapist teaches both LE classes during his/her designated week. A description of the LE classes is as follows:

LE Class Number 1: Achieving Wellness Through Leisure

The focus of this class is placed on defining leisure and discussing its importance in individual's lives both prior to injury and after an injury. The concept of wellness is introduced with the emphasis placed on how leisure contributes to one's overall wellness lifestyle. The class also reviews medical complications that may arise as a result of a SCI. Participants are then educated on how leisure can be utilized to significantly decrease the occurrence of these medical complications. The role of TR during rehabilitation is as presented along with how information received through a TR specialist can be used post discharge. The goal of this class is to aid individuals in realizing and appreciating leisure post injury and to begin to educate them on leisure opportunities they may have post discharge.

Overall, this LE class places emphasis on increasing individuals' leisure awareness and knowledge of leisure resources. Leisure awareness includes individuals' understanding of leisure and its benefits, having a healthy attitude toward leisure participation, decision making skills and knowledge of and the ability to utilize leisure activities. Upon completion of LE class number one, individuals are expected to understand (a) the benefits of leisure, (b) how leisure can be utilized to decrease medical complications secondary to their disability and (c) how they can access leisure opportunities and resources post discharge.

LE Class Number 2: The ADA, Accessibility and Public Accommodations

The purpose of this class is to educate participants on the ADA and the areas of their life it affects. The class is also used to educate participants on the variety of barriers that they may encounter while out in the community including problems with curbs, sidewalks, steps, doorways, parking and restrooms. Participants are shown fifteen slides that examine “real world” situations (e.g. pictures of curb ramps, parking spaces and rough terrain). They are asked to identify what is positive about the slides and what areas need improvements. If participants identify a problem within the slide, they are asked how they would improve or solve the situation if they experienced it. The class also aids individuals in the steps they can take to become a successful self-advocate. Lastly, participants are educated on how the ADA is enforced and avenues they can pursue if they encounter an ADA related problem post discharge.

Description of Participants

This study assessed a convenience sample of five participants to examine effectiveness of LE classes offered for individuals with SCI. Criteria for participants to be included in this study were (a) individuals who recently sustained a SCI, (b) that were between the ages of 18 to 65, (c) received TR services as a part of their rehabilitation treatment and (d) participated in two leisure education classes offered by the TR department. Individuals who were thought to be likely to consent to participate in the study were identified through their TR therapists. Potential participants were approached in person by the researcher and asked to participate in this study. All participants were in their hospital rooms and had recently completed a full-day of therapy. Their participation

was voluntary and no incentive was provided. While the researcher identified twenty potential participants, only six individuals consented to participate. However, one individual could not be included in the study because he missed the first LE intervention. Therefore, the sample size of this study was five participants. Several individuals were approached to participant did not consent stating that they only wished to focus on their recovery. While in the facility setting, individuals are often approached by other researchers working within the system. Therefore, some individuals may have already consented to participate in other studies and thus been less likely to participate in this and other studies.

The sample for this study consisted of 5 participants. All participants were males who were receiving treatment at a large rehabilitation hospital located in a metropolitan city in the southeastern United States. The average age of the participants was 33.8 years with a range of 18 to 50 years. A description of the participants is as follows:

Jack

Jack is a 39-year-old White male who sustained a C-4 SCI as a result of a parachuting accident. At the time of his injury, Jack was active in the Special Operations section of the Airforce. He was employed as a para-jumper and sustained a SCI after a badly landed jump from an airplane. Jack had been receiving rehabilitation treatment at the facility for six weeks. Both interviews with Jack took place in his hospital room. During his initial pre-LE intervention interview, Jack was seated in his power wheelchair in the middle of his room next to his bed. He was receiving breathing assistance from a ventilator. Jack was surrounded by vases containing flowers and balloons. On his

windowsill there were several framed pictures of his family and friends. On a bulletin board on the wall opposite of his bed were cards and words of encouragement from home. When the researcher entered the room to begin the first interview, Jack's father and his wife were in the room with him. During his second, post-LE intervention interview, Jack was again seated in his wheelchair close to his bed. He was no longer on a ventilator and was alone in the room when the researcher entered. The room's atmosphere did not change between interviews; during the second interview the room continued to be filled with flowers, balloons, cards and pictures from home.

Jimmy

Jimmy is a 29-year-old White male who sustained a C-6 SCI as a result of a work-related injury. He sustained his injury while he was sitting in his work-vehicle finishing a telephone conversation when a branch from a tree fell on top of his vehicle. Jimmy had been receiving rehabilitation treatment for twenty-four weeks. Both interviews with Jimmy took place in his hospital room. During the first, pre-LE intervention interview, Jimmy was seated in his power wheelchair near the window. Throughout his room, Jimmy had several pictures of his young children, along with pictures they had drawn for him. On his nightstand, there were a few cards from friends and family. During his second, post-LE intervention interview, Jimmy was again seated in his power wheelchair near the window. The room's atmosphere did not change between the two interviews.

Quintin

Quintin is an 18-year-old White male who sustained a T-3 SCI as a result of a motor vehicle accident. He sustained his injury while working as a volunteer firefighter.

While responding to a call, the truck he was riding was involved in a roll-over crash. Quintin had been receiving rehabilitation treatment for six weeks. All interviews took place in Quintin's hospital room. During the first, pre-LE intervention interview, Quintin was lying in bed and was watching TV when the researcher entered. His room was a typical hospital room and did not contain any visible mementos from home. Quintin was alone in the room and answered questions quietly and often seemed unsure of his answers. During his second, post-LE intervention interview, Quintin was again in his room but was seated in his wheelchair. His parents were in the room with him and they were again watching TV. The room's atmosphere did not change between interviews and still did not contain visible reminders of home.

Bobby

Bobby is a 50-year-old White male who sustained a C-3/4 SCI as a result of a pedestrian versus a motor vehicle accident. At the time of his injury, Bobby was on a hunting trip and was hit by a car while on the hunting grounds. Bobby had been receiving rehabilitation treatment for eight weeks. Both interviews with Bobby took place in his hospital room. During the first, pre-LE intervention interview Bobby was seated in his power wheelchair near his bed. When the researcher entered, Bobby was watching TV while his brother was outside his room making a telephone call. At the time of the first interview, Bobby was receiving assistance with breathing through a ventilator. As a result, Bobby spoke extremely softly and was difficult to understand. He often had to repeat his answers to the interview questions several times in ensure the researcher had heard all he had to say. Throughout his room, Bobby had a few framed pictures of family

and friends from home. During his second, post-LE intervention interview, Bobby was again seated in his power wheelchair near his bed. He was again watching TV when the researcher entered, this time with his wife. During the second interview, Bobby was no longer on a ventilator. While his voice was still weak, Bobby could now speak more clearly and project his voice. The room's atmosphere did not change between interviews.

David

David is a 33-year-old African American male who sustained a C-6 SCI as a result of a motor-vehicle accident. At the time of his injury, David was driving with his family when he lost control and the vehicle rolled over. David had been receiving rehabilitation treatment for three months. Both interviews with David took place in his hospital room. At the time of the first, pre-LE intervention interview, David was seated in his power wheel chair near the door to his room. When the researcher entered he was alone and watching TV. David's hospital room was typical and contained no visible reminders of home. At the time of his second, post-LE intervention interview, David was again in his room alone watching TV while seated in his power wheelchair near the door. The room's atmosphere did not change between interviews.

Instrumentation

The Leisure Competence Measure

Measuring outcomes of treatment services has become a critical requirement for health care programs (Johnston et al., 1992; Smith, 1994; Studenski & Duncan, 1993). Outcomes must be measured to be competitive and to ensure the effectiveness of healthcare interventions. These outcomes have become important to establish service need and to secure repayment from insurance companies (Kloseck, Crilly, Ellis & Lammers, 1996). Both Joint Commission on Accreditation of Healthcare Organization (JCAHO) and the Commission for Accreditation of Rehabilitation Facilities (CARF) now require client performance and functional outcomes to be measured (Kloseck, Crilly & Hutchinson-Troyer, 2001).

Within the TR profession, very few measures exist that allow TR specialists to measure the outcomes of interventions and services. Since an independent leisure lifestyle is one of the goals of TR services, it is critical for TR professionals to have the ability to measure leisure competence to place individuals in appropriate interventions (Kloseck, Crilly, Ellis & Lammers, 1996). The Leisure Competence Measure (LCM) was developed by Kloseck and Lammers in response to this problem. The LCM aids TR specialists in demonstrating change in leisure functioning in their clients as a result of TR services. It was designed for use in a variety of settings including hospitals, rehabilitation facilities, and community-based agencies and with a variety of populations including individuals with SCI (Kloseck, Crilly & Hutchinson-Troyer, 2001). The LCM is a multidimensional tool that was designed to address competences required for successful

leisure functioning (Kloseck, Crilly, Ellis & Lammers, 1996). The measure is based on the LAM and on the behavioral concept of competence.

The LCM is consistent with the Functional Independence Measure (FIM) that is used by disciplines such as occupational, physical and speech therapy (Hamilton, Granger, Zielenny & Tashman, 1987). It therefore provides TR specialists employed in rehabilitation facilities a consistent and acceptable means of reporting to these other disciplines. While the FIM measures an individual's personal independence in activities of daily living, it does not measure their overall leisure functioning (Kloseck, Crilly, Ellis & Lammers, 1996). Used together, outcomes of the FIM and the LCM can provide a prediction of how an individual will likely function in a non-clinical setting.

The LCM measures client functioning in eight areas of leisure: (1) leisure attitudes, (2) leisure awareness, (3) leisure skills, (4) cultural/social behaviors, (5) group interaction skills, (6) community integration skills, (7) social contact and (8) community-based participation (Kloseck, Crilly, Ellis & Lammers, 1996; Sylvester, Voelkl, & Ellis, 2001; Shank & Coyle, 2002). The first subscale of leisure attitudes examines the behaviors that a client exhibits or the feeling they express toward leisure involvement. This area of the LCM looks at the client's initiative and their willingness to develop new skills and hobbies. The subscale of leisure awareness is used to examine a client's knowledge and understanding of leisure including their personal beliefs and their self-awareness in leisure and their knowledge of leisure opportunities. The third subscale of leisure skills examines the skills possessed by the client that affect their overall leisure involvement including their ability to make choices, their activity skills and their ability

to identify and access local leisure resources. The cultural/social behaviors subscale looks at the specific social and cultural behaviors the client exhibits and how they affect their leisure participation. These behaviors include hygiene, dress, manners and their tolerance of others. The fifth subscale, group interaction skills, examines the client's ability to function within a group setting. The scale measures how the individual cooperates with others, how they function during one on one interactions and if they withdrawal or experience isolation from social situations. The sixth subscale of the LCM examines an individual's community reintegration skills including their ability to engage in activities and with others in the community, locate and utilize community resource and navigate within the community. Social contact, the seventh subscale examines the type and duration of social contact a client has with others. Lastly, the eighth subscale of community participation examines a client's overall leisure participation pattern (Kloseck, Crilly, Ellis & Lammers, 1996; Sylvester, Voelkl, & Ellis, 2001; Shank & Coyle, 2002).

Each of the areas examined by the LCM have been found to be prerequisites for successful independent leisure functioning and actual leisure involvement (Kloseck, Crilly, Ellis & Lammers, 1996). The LCM is scored on a scale from 1 to 7. Scores designated to each subscale provide an indication of the following (Sylvester, Voelkl, & Ellis, 2001):

7 = Complete independent functioning

6 = Modified independent functioning

5 = Modified dependent functioning

- 4 = Modified dependent functioning with minimal assistance from another individual
- 3= Modified dependent functioning with moderate assistance from another individual
- 2 = Modified dependent functioning with maximum assistance from another individual
- 1= Total dependent functioning with total assistance from another individual

The LCM can be used for four purposes: (1) to identify initial levels of client functioning, (2) establish specific client goals related to the deficiencies found through the LCM, (3) to monitor client progress and (4) to measure outcomes and effectiveness of TR interventions and programming (Kloseck, Crilly, Ellis & Lammers, 1996).

For the purposes of this research, two subscales of the LCM were employed to measure individual's leisure awareness and leisure attitudes. During LE intervention number one, individuals will receive education regarding the benefits of leisure participation and how it contributes to their health and wellness. They will also be educated on how leisure can be used post-discharge and how to access leisure resources and opportunities in their discharge community. The LCM will be used to determine if participation in LE interventions produces significant change in individuals with SCI leisure awareness and if participation in LE interventions positively changes their leisure attitudes.

Leisure Awareness

The leisure awareness subscale of the LCM is designed to examine the participant's knowledge and understanding of leisure. For an individual to be considered independent on the leisure awareness subscale, they must be able to identify personal benefits of leisure involvement. The participant must be able to state their own leisure

strengths and weaknesses. The individual must have realistic expectations and be able to set goals regarding their leisure involvement. Lastly, the participant must be able to identify five or more leisure activities (Kloseck & Crilly, 1989).

Leisure Attitude

The leisure attitudes subscale of the LCM is designed to examine the feelings or behaviors that a participant demonstrates which suggest their overall attitude toward leisure involvement. For an individual to be considered on the leisure attitudes subscale, they must take initiative for their own leisure involvement. They must display a willingness to develop new leisure interests and skills. Lastly, the individual must demonstrate feelings of enjoyment and satisfaction regarding leisure involvement and participation (Kloseck & Crilly, 1989).

Reliability and Validity of the LCM

Kloseck, Crilly and Hutchinson-Troyer (2001) examined the reliability and validity of the LCM within an acquired brain injury rehabilitation program, a geriatric day hospital and a hospital serving individuals with SCI. As reported in their research, the internal consistency of the LCM was found to be satisfactory for the total measure at a Cronbach's alpha reliability coefficient of 0.89. All alpha values for each diagnostic category were found to be high. This finding supports the use of the LCM in a variety of settings. Specifically, for individuals with SCI at the time of admission, the Cronbach's alpha reliability coefficient was found to be a .70.

In addition to the LCM subscales of leisure awareness and attitudes, participants were asked to participate in a semi-structured interview. Participants were also asked to complete an interview before and after the LE classes.

Data Collection

Data were collected through scores received on the subscales of leisure awareness and attitude of the LCM, pre and post-tests completed before and after the LE interventions and through semi-structured interviews. Data were collected and analyzed by the primary researcher. Participants completed the leisure awareness and attitude subscales of the LCM prior to and following LE classes. In addition, upon completion of the LE classes, participants completed semi-structured interviews by the primary researcher. Participants completed an agency specific pre and post-test before and after the completion of the LE classes. The test contains nine questions and includes questions regarding the relevance of leisure participation, community reintegration and the Americans with Disabilities Act. Together, completion of the LCM, the semi-structured interview and the LE assessments took no longer than one hour. The LE pre and post test can be found in Appendix A. Semi-structured interviews questions can be found in Appendix B. All data were collected in a quiet and comfortable environment free from outside distractions. Data collection sessions were arranged with each participant prior to participation in LE interventions.

Data Analysis

For the purposes of this research, participants served as their own controls. Pre and post scores on the LCM were compared upon completion of LE interventions. Data

from the in-depth interviews were transcribed and were coded based on principles outlined by Merriam (2009). Assigning codes to pieces of data is how the research can begin to construct categories. For the purposes of this research, data was coded using opening coding which allows the research to be open for any possible theme to emerge (Merriam, 2009). During open coding, the research completes several readings of transcribed data to identify key words or phrases used by the participant. Key words and phrases are then grouped from all data collects to form themes. Themes are designed to serve as abstractions derived from the data and are not the data itself (Merriam, 2009).

CHAPTER FOUR

RESULTS

The purpose of this study was to examine effectiveness of a LE intervention on knowledge of aspects of community reintegration and the relevance of leisure participation for individuals who have recently sustained spinal cord injuries. Individuals participating in this study were receiving treatment at a large rehabilitation hospital located in a metropolitan city in the southeastern United States. Study participants completed two LE interventions covering aspects of leisure awareness and community reintegration. Participants were interviewed prior to and upon completion of the LE interventions to determine the overall effectiveness of the interventions. Data were collected for this study through LE pre and post-testing and semi-structured interviews with participants. All data were collected for each participant individually in their hospital rooms.

To determine effects of the agency specific LE intervention, each participant completed the LE pre- and post-test to assess knowledge of the Americans with Disabilities Act, the relevance and benefits of leisure participation and community accessibility issues.

LCM results for each participant were analyzed using the leisure awareness and leisure attitudes subscales of the LCM. The LE pre and post test can be found in Appendix A and semi-structured interview questions can be found in Appendix B.

Pre-Test Findings

To examine a participant's leisure awareness prior to the LE interventions, they were asked what their leisure time looked like prior to their injury and what activities they enjoyed. Participants also completed an agency specific question included on the LE pre-test: Why is participating in recreation and leisure activities so important after having a Spinal Cord Injury? How can it be bad for your body if you don't participate in recreation or leisure activities? Participants were also asked the following question during semi-structured interviews: What role did leisure play in your life prior to your injury?

Jack

Jack was approached for participation in this study after receiving treatment for two weeks and one week prior to completing the LE interventions. When asked about his leisure participation prior to his injury, Jack stated the following:

“I was in the military so my job took up most of my time. But when I wasn't working, I enjoyed playing golf and spending time with my son. But really because I worked so much, most of my free time I just relaxed and chilled.”

When asked the agency specific question on the LE pre-test, Jack responded:

“Right now leisure is important to me because it gets me out of the hospital and it lets you experience what the real world is like for someone in a wheelchair. It also keeps you from becoming a bump on a log.”

Lastly, when asked what role leisure played in his life prior to his injury, Jack stated:

“No, I was more work oriented. I worked all the time which was fun but it was intense so when I would get off I would chill out.”

Based on this information, Jack was assigned a score of 4, modified dependence with minimal assistance on the leisure awareness subscale of the LCM. In this case, minimal assistance signifies that the participant was able to identify 75% of the benefits

of leisure participation on their own. Jack benefited from verbal cueing from the researcher to completely identifying the benefits of leisure involvement. Jack was also able to identify three leisure interests.

Quintin

Quintin was approached for participation in this study after receiving treatment for six days and one week prior to completing the LE interventions. When asked about his leisure participation prior to his injury, Quintin stated the following:

“I was into outdoors stuff. I hunted a lot. I fished sometimes. I also spent a lot of time with my girlfriend to stay connected her. I liked to just ride. I love to ride and go for drives.”

When asked the agency specific question on the LE pre-test, Quintin responded:

“Participating in leisure keeps you from being depressed. It also keeps you fit and doing the same things you did before your injury.”

Lastly, when asked what role leisure played in his life prior to his injury, Quintin stated:

“It played a big role. I liked to stay active and do the things I liked to do. It relieved stress.”

Based on this information, Quintin was assigned a score of 4, modified dependence with minimal assistance on the leisure awareness subscale of the LCM. Like Jack, Quintin benefited from verbal cuing from the researcher to identify the benefits of leisure participation. Quintin was also able to identify three leisure interests.

Bobby

Bobby was approached for participation in this study after receiving treatment for one month and one week prior to completing the LE interventions. When asked about his leisure participation prior to his injury, Bobby stated the following:

“I liked to hunt, fish and garden. I liked the outdoors.”

When asked the agency specific question on the LE pre-test, Bobby responded:

“I am not sure what to say or think about that question.”

Lastly when asked what role leisure played in his life prior to his injury, Bobby stated:

“Of course it was a priority. It was one of my favorite things. It was relaxing.”

Based on this information, Bobby was assigned a score of 2, modified dependence with maximal assistance on the leisure awareness subscale of the LCM. Bobby was unable to identify any benefits of leisure participation on his own and required explanation for the researcher. Bobby was however able to verbally identify three leisure interests.

Jimmy

Jimmy was approached for participation in this study after receiving treatment for five months and two weeks prior to completing the LE interventions. When asked about his leisure participation prior to his injury, Jimmy stated the following:

“I went hunting and fishing, played gold and video games.”

When asked the agency specific question the LE pre-test, Jimmy responded:

“So far I haven’t really been focused on leisure. I am more concerned with getting better physically.”

Lastly when asked what role leisure played in his life prior to his injury, Jimmy stated:

“I made sure I had time to do the things I loved. I guess, it was like my clear your mind time. It was time I had to myself.”

Based on this information, Jimmy was assigned a score of 3, modified dependence with moderate assistance on the leisure awareness subscale of the LCM.

While Jimmy was able to verbalize some of the benefits of leisure participation, he stated that he was not focused on leisure participation while in rehabilitation treatment. He was however able to identify 4 leisure interests.

David

David was approached for participation in this study after receiving treatment for six weeks and two weeks prior to completing the LE interventions. When asked about his leisure participation prior to his injury, David stated the following:

“I enjoyed going to the movies with my wife and going out to eat. I liked to watch TV too.”

When asked the agency specific question on the LE pre-test, David responded:

“Leisure participation is important because you don’t want to be stuck in the house or get to be depressed or feel sorry for yourself or take it out on your family. It makes you feel normal.”

Lastly when asked what role leisure played in his life prior to his injury, David stated:

“I guess I wasn’t really that active. I worked a lot. But I really enjoyed going out, you know, to the movies or out to eat.”

Based on this information, David was assigned a score of 4, modified dependence with minimal assistance on the leisure awareness subscale of the LCM. While David was able to verbalize the benefits of the leisure participation, he was unable to identify more than two leisure interests.

Post-Test Findings

To examine participant's leisure awareness upon completion of the LE interventions, they were asked to answer the agency specific LE question again. Participants were also asked what they had learned about leisure participation through TR treatment while in rehabilitation. Lastly, individuals were also asked what the role of leisure and recreation had played in their recovery from their injury. Participants completed the LE post-test and semi-structured interview with the researcher within two weeks of completing the LE interventions.

Jack

When asked the agency specific LE question again, Jack stated:

“I think it is important to get out and about and do stuff not just be stuck in a room and feel guilty about your injury. And you know, go do stuff and live. It makes you feel better about yourself. I have always been active so it's not like I am going to stop now. Sitting around too much, you know, probably will affect a lot of things. It could affect your bowel movements, your bladder, your blood pressure, and your skin-all kinds of things like that.”

When asked what he had learned about leisure participation through TR treatment, he responded:

“That it can be fun. And it gets you out of the hospital. You know keeps your mind off of just focusing on the injury so much. So it's good for you physically and psychologically, I think. I figured out that there are a lot of things you can still do. Just cause you're paralyzed doesn't mean you can't do shit. Yesterday, I went and I was shooting guns. And that's something I was into before so that's gonna be cool. It's something I will do when I get out of here.”

Lastly, when asked what role leisure and recreation had played in his recovery, Jack stated:

“It has been good for me because it has shown me that I can still do the things I like. It has also gotten me out into the community. Overall, it has helped me stay active and kept me from feeling down.”

Based on the above responses, Jack was assigned a score of 6, modified independence on the leisure awareness subscale of the LCM. Jack was able to verbalize the benefits of leisure participation and identified leisure activities that he realistically saw himself participating in post discharge. Through participation in LE intervention and TR treatment, Jack was able to improve his score on the LCM from a 4 to a 6.

Quintin

When asked to re-answer the agency specific question on the LE pre/post test, Quintin stated:

“It relieves stress. It keeps you back where you were. It keeps you happy and fit. It would be bad for your body to not be active. Just sitting around, you are going to get fat. And you will have health problems.”

When asked what he had learned about leisure participation through TR treatment, he responded:

“That it still relieves stress.”

Lastly, when asked what role leisure and recreation had played in his recovery, Quintin stated:

“I haven’t hunted or fished or anything. But I have spent time with my girlfriend. I haven’t drove. Spending time with my girlfriend helps out. Just lets me know she is here for me. I’ve also gone out into the community. They took me out to Target. That was the first time I had been out of the hospital. It was good to get out, you know. Let’s see. I am doing outdoor stuff, like shooting and stuff. And sports. I use to play pool a lot too. It was way harder in the wheelchair. I don’t think I will play much anymore. It’s too frustrating and hard to play in a chair.”

Based on his above responses, Quintin was assigned a score of 5, modified dependence on the leisure awareness subscale of the LCM. While Quintin was able to verbalize the basic benefits of leisure participation, he demonstrated frustration with participation in pre-morbid leisure interests while in a wheelchair. Quintin would continue to benefit from LE interventions and leisure participation. However, Quintin did improve his score on the LCM subscale from a 4 to a 5.

Bobby

When asked to re-answer agency specific question on the LE pre/post test, Bobby stated:

“I guess it would keep your strength up, muscle tone. It should have a lot of benefits, but I can’t say that it does for me though.”

When asked what he had learned about leisure participation through TR treatment, he responded:

“I have learned a lot. I think I know what you talking about. How to take care of myself. How to get other people to take care of me. But nothing specific to leisure.”

Lastly, when asked what role leisure and recreation had played in his recovery, Bobby stated:

“I went shooting guns with Nick (the outdoors specialist). I painted a target with my mouth stick and shot wads of paper at it. It was fun. I’ve played games too. That’s about it.”

Based on his above responses, Bobby was assigned a score of 2, modified dependence with maximal assistance on the leisure awareness subscale of the LCM. Even after participation in LE interventions, TR treatment and leisure participation, Bobby continues to require assistance to identify the benefits of leisure. During his interview

Bobby admitted that while he had received education on leisure participation, he did not remember the information and was not able to restate it. Because of this, Bobby's original score of 2 did not change after participating in TR treatment and LE interventions.

Therefore, Bobby would continue to benefit from TR treatment and LE interventions.

Jimmy

When asked to re-answer the agency specific question on the LE pre/post test,

Jimmy stated:

“It keeps you going, I guess. It keeps your mind off your injury and your accident. Physically it keeps you fit and healthy. Helps you stay in shape, you know. It helps you stay positive and keeps you going.”

When asked what he had learned about leisure participation through TR treatment, he responded:

“I haven't really learned much yet. I haven't been that far into my accident to you know. Not really yet.”

Lastly, when asked what role leisure and recreation had played in his recovery, Jimmy stated:

“Doing things that I enjoy it keeps my mind off my accident. It's freeing my mind still. My view of leisure hasn't changed because of my injury. I will still do things that I love.”

Based on his above responses, Jimmy was assigned a score of 4, modified dependence with minimal assistance. While Jimmy was able to verbalize the benefits of leisure participation, he was unable to verbalize any new learning through TR treatment. During his interview, Jimmy stated that he is not “far enough” from his injury to focus on leisure participation. Jimmy was able to improve his score on the subscale of the LCM

from a 3 to 4. However, he would continue to benefit from TR treatment, participation in LE interventions and leisure activities.

David

When asked to re-answer the agency specific question on the LE pre/post test,

David stated:

“Doing the things that you enjoy helps you feel normal. It makes you feel like yourself. For me doing the things that I enjoy gets me out into the community. It also helps you stay active.”

When asked what he had learned about leisure participation through TR treatment, he responded:

“I have learned about the ADA, which I didn’t know about before. My leisure is not going to change much because I can still do the things I liked to do before like going to the movies and out to eat.”

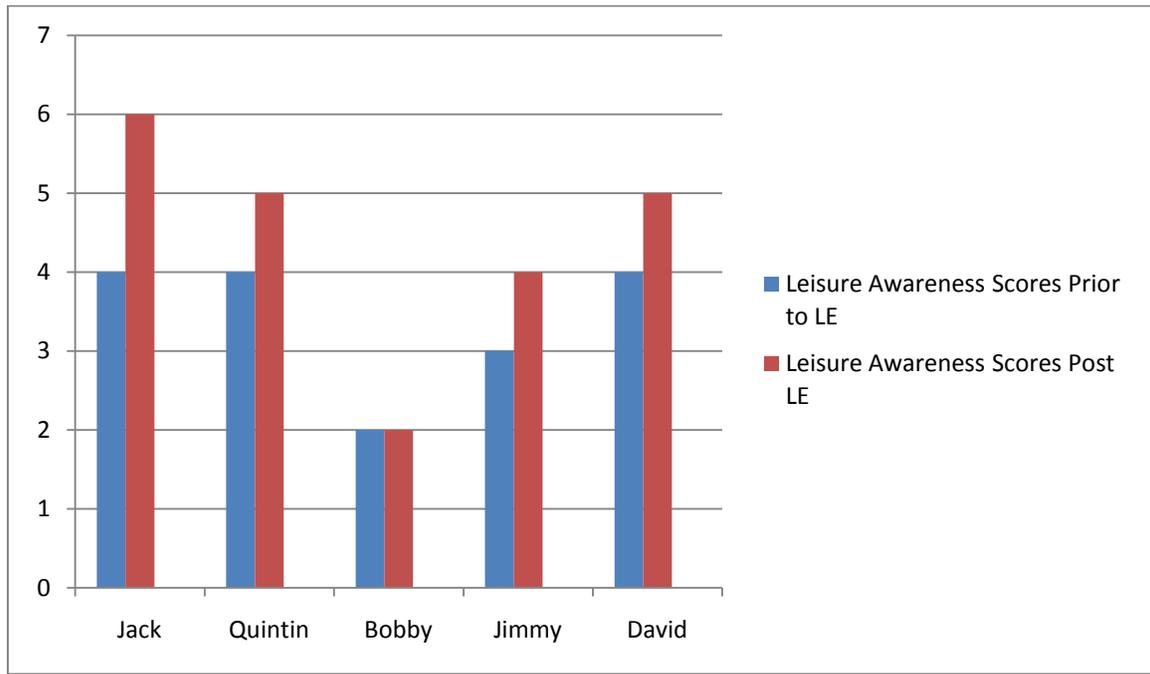
Lastly, when asked what role leisure and recreation had played in his recovery, David responded:

“I’ve gone out to eat with my wife. She keeps me active and makes sure I get out of the hospital. So I’ve been able to get out and see what being in the community is like. I am not going to let this change me. I am still going to be me you know? I guess participating in leisure has helped me realize that I can still be me.”

Based on his above responses, David was assigned a score of 5, modified independence on the leisure awareness subscale of the LCM. David was able to verbalize the benefits of leisure, however still demonstrates limited leisure interests. However, after TR treatment, leisure participation and the LE interventions, David was able to improve his score on the subscale of the LCM from a 4 to a 5.

A summary of the scores on the leisure awareness subscale of LCM can be seen in table 1.

Table 1: Leisure Awareness Scores Before and After LE



A summary of questions to the agency specific question given by participants before and after participation in LE interventions can be found below in table 2.

Why is participating in recreation and leisure activities so important after having a Spinal Cord Injury? How can it be bad for your body if you don't participate in recreation or leisure activities?

Table 2: Answers of Agency Specific Question Before and After LE

Participants	Answers of Agency Specific Question Pre-LE	Answers on Agency Specific Question Post-LE
Jack	Right now leisure is important to me because it gets me out of the hospital and it lets you experience what the real world is like for someone in a wheelchair. It also keeps you from becoming a bump on a log.	I think it is important to get out and about and do stuff not just be stuck in a room and feel guilty about your injury. And you know, go do stuff and live. It makes you feel better about yourself. I have always been active so it's not like I am going to stop now. Sitting around too much, you know, probably will affect a lot of things. It could affect your bowel movements, your bladder, your blood pressure, and your skin-all kinds of things like that.
Quintin	Participating in leisure keeps you from being depressed. It also keeps you fit and doing the same things you did before your injury.	It relieves stress. It keeps you back where you were. It keeps you happy and fit. It would be bad for your body to not be active. Just sitting around, you are going to get fat. And you will have health problems.
Bobby	I am not sure what to say or think about that question.	I guess it would keep your strength up, muscle tone. It should have a lot of benefits, but I can't say that it does for me though.
Jimmy	So far I haven't really been focused on leisure. I am more concerned with getting better physically.	It keeps you going, I guess. It keeps your mind off your injury and your accident. Physically it keeps you fit and healthy. Helps you stay in shape, you know. It helps you stay positive and keeps you going.
David	Leisure participation is important because you don't want to be stuck in the house or get to be depressed or feel sorry for yourself or take it out on your family. It makes you feel normal.	Doing the things that you enjoy helps you feel normal. It makes you feel like yourself. For me doing the things that I enjoy gets me out into the community. It also helps you stay active.

Leisure Attitudes

The leisure attitudes subscale of the LCM is designed to examine the feelings or behaviors that a participant demonstrates which suggest their overall attitude toward leisure involvement. For an individual to be considered on the leisure attitudes subscale, they must take initiative for their own leisure involvement. They must display a willingness to develop new leisure interests and skills. Lastly, the individual must demonstrate feelings of enjoyment and satisfaction regarding leisure involvement and participation (Kloseck & Crilly, 1989). To examine participants' leisure attitudes they were asked several questions regarding their leisure involvement prior to their injury and while they have been receiving rehabilitation treatment. The questions included question number 5 and 6 on the agency specific LE pre/post test and questions regarding the role of leisure prior to their injury and as they have begun to recover from their injury.

Leisure Attitude Scores Prior to Completion of LE Intervention

Jack

During his pre-LE intervention interview, Jack quickly admitted that his work had been his priority and that he had little time for leisure and recreation. He stated that often because his line of work as a para-jumper for the Airforce was extremely intense, that when he did have free-time, his leisure consisted of relaxing with family and friends.

“We do all the fun stuff (at work) and got paid to do the fun stuff other people pay to do. I was more work oriented. I worked all the time which was fun but it was intense so when I would get off I would chill out. So my free time was chilling out on the couch or playing with my son or family. Riding my Harley with the boys. Playing golf-shit like that. Relaxing (Jack, SCI).”

While he admitted to having limited leisure time, he stated that it was important to him to take the time to relax. Jack was also asked to verbalize the benefits of leisure participation after a SCI:

“You get out of the hospital, experience what the real world is like for someone in a wheelchair. You don’t want to become a bump on a log.”

Jack’s answer to this question was more focused on leisure participation as a way to leave the hospital. While he was able to verbalize the benefits of participating in outings as experiencing the community as someone with a SCI and he demonstrated a positive attitude towards participation, he did not reference anything regarding the long term benefits of leisure participation. Based on his first interview and the above answers, Jack was assigned a score of 5, modified dependence on the leisure attitude subscale of the LCM.

Quintin

At the time of his pre-LE intervention interview, Quintin had only been receiving treatment for six days. During his first interview, Quintin frequently was unable to answer the questions he was asked. Quintin was the youngest of the all study participants and he verbalized leisure interests typical for someone within his age group.

“I hunted a lot. Fished sometimes. Spending time with my girlfriend most of the time. Just ride. I love to ride and go for drives.”

Similarly, when asked why leisure was important to him prior to his injury, Quintin stated:

“It helped me relax and gave me the time to spend with my girlfriend. It was what I liked to do.”

Quintin demonstrated a positive attitude towards his pre-injury leisure interests and leisure participation as a whole. He demonstrated a feeling of satisfaction towards continuing participation in his specific interests. Based on this information and his above responses, Quintin was assigned a score of 5, modified dependence on the leisure attitude subscale of the LCM.

Bobby

Similarly to Quintin, Bobby was also unable to answer most questions asked of him during his pre-LE intervention interview. As he was still receiving breathing assistance through a ventilator, Bobby was unable to project his voice louder than a faint whisper and often abandoned thoughts when the researcher could not understand them clearly after several repetitions. Of all the study participants, Bobby was the only individual who sustained his injury during a leisure related activity (e.g. hunting). During his first interview, Bobby stated that his leisure interests included:

“Hunting, fishing and gardening. Just outdoors stuff.”

When he was asked why he participated in leisure, Bobby stated:

“It was one of my favorite things. It was just relaxing.”

While Bobby demonstrated a positive attitude towards his pre-injury leisure interests, he verbalized decreased interest in learning new leisure pursuits, stating:

“I don’t see what I could do. I can’t use my arms or my legs.”

Based on his first interview and the above statements, Bobby was assigned a score of 2, modified dependence with maximal assistance on the leisure attitude subscale of the LCM.

Jimmy

During his pre-LE intervention interview, Jimmy stated that he enjoyed being active prior to his injury:

“I enjoyed hunting, fishing, playing golf and playing video games. I was active all the time. Always stayed busy doing something.”

When asked why he participated in leisure, Jimmy stated:

“It was time I had to myself. It was time that allowed me to clear my mind.”

Like Bobby, Jimmy was discouraged by his limited physical abilities:

“I have use of my arms, no use of my hands and I am paralyzed from the nipple line down.

This seemed to tie into his thoughts regarding leisure participation post-SCI:

“I am not far enough away from my injury (to think about leisure). Not ready yet.”

Based on his interview and the above statements, Jimmy was assigned a score of 3, modified dependence with moderate assistance on the leisure attitude subscale of the LCM. While Jimmy maintained a positive attitude regarding his pre-injury leisure interests, he was demonstrated decreased initiation and motivation to learn new leisure pursuits.

David

During his first, pre-LE intervention interview, David verbalized limited leisure interests:

“I mainly enjoy going to the movies or out to eat. Other than that it’s just work.”

When asked why he viewed participating in leisure activities as important, he stated:

“I don’t want to be stuck in the house, or get to be depressed or feel sorry for yourself or take things out on your family. Being active makes you feel normal.”

David stated that post-SCI, he did not have concerns about remaining active:

“My wife will keep me busy. She always makes sure that I stay active.”

Throughout his initial interview, David demonstrated a positive attitude towards leisure.

However, he verbalized limited leisure interests and admitted to relying on his wife to

“keep him busy/”. Based on his interview and his above statements, David was assigned a score of 4, modified dependence with minimal assistance on the leisure attitude subscale of the LCM.

Leisure Attitude Scores Upon Completion of LE Intervention

Jack

During his post LE intervention interview, Jack admitted to gaining a greater appreciation for the importance of leisure participation.

“That it (leisure) can be fun. And it gets you out of the hospital. You know keeps your mind off of just focusing on the injury so much. So it’s good for you physically and psychologically, I think. I figured out that there are a lot of things you can still do. Just cause you’re paralyzed doesn’t mean you can’t do shit.”

While Jack may have demonstrated limited leisure participation and awareness prior to his SCI, based on his interview it can be said that he will be more likely to actively participate in leisure after leaving rehabilitation. Through TR treatment Jack was not only

given the opportunity to see that leisure participation is still possible after a SCI, he was also able to verbalize the mental and physical benefits of remaining active. Based on this information Jack was assigned a score of 6 on the leisure attitudes subscale of the LCM, thus improving his score from a 5 to 6 after completing the LE intervention.

Quintin

During his post-LE intervention interview, Quintin continued to verbally identify spending time with his girlfriend as his primary leisure post-injury. While he again demonstrated a positive attitude and general satisfaction with his leisure, a client having only one primary leisure interest post-rehabilitation could create problems and could potentially lead to increased levels of boredom, frustration and poor well-being. With verbal cueing from the researcher, Quintin was able to identify activities that he had experienced as a result of TR treatment such as going out into the community, adaptive shooting and pool. He continued to state that his main leisure pursuit was spending time with his girlfriend.

Based on his second interview and his above statements, Quintin was assigned a score of 3, modified dependence with moderate assistance. Thus Quintin's score of the LCM decreased from a 5 to 3 post LE intervention participation. While Quintin's attitude towards leisure was positive, he verbalized frustration when talking about leisure activities that were challenging from a wheelchair level. Quintin would benefit from encouragement and continued practice and education through TR treatment.

Bobby

During his post-LE intervention interview, Bobby continued to verbalize negative feelings toward TR, leisure and community involvement post-injury. Bobby was however able to verbally identify leisure activities that he had had the opportunity to participate in:

“Shooting guns with Nick. I painted a target with my mouth stick and shot wads of paper at it. That’s about it. Other times we played games in the rec room. It was fun.”

While Bobby demonstrated positive feelings towards the above leisure participation, he displayed opposite feelings towards being out in the community. Bobby reported only being outside the hospital once since his January 16th admission and he did not express outward interest in returning to the community:

“I didn’t care about it (being out). I guess it just depressed me. I guess I felt humiliated being in a chair and having people walk me around.”

Bobby also verbalized a negative attitude towards leisure when asked if leisure had played a role in his recovery:

“It (leisure participation) should have an effect (mentally and physically). Can’t say it has for me.

Based on his interview and the above statements, Bobby was assigned a score of 2, modified dependence with maximal assistance on the leisure attitude subscale of the LCM. Bobby’s score on the leisure attitude subscale was unchanged by participation in LE interventions and TR treatment. Bobby continued to demonstrate a negative attitude towards leisure participation and community reintegration. Therefore, he would continue

to benefit from TR treatment, leisure participation and education and community reintegration outings.

Jimmy

During his second, post-LE intervention interview, Jimmy continued to be more focused on his physical deficits which continued to lead to negative feelings toward leisure participation:

“I still have regained any physical functioning. I have participated in a few leisure activities in TR that were ok, but nothing that I really see myself doing at home. I’ve been going to the pool and that is cool but I am from a small town and I am not sure if there is a pool that is accessible for me.”

Jimmy did however demonstrate increased confidence regarding being in the community after participating in the LE intervention and community outings:

“I’ve learned not to be embarrassed by public, people, things, buildings. Just go with the flow. Ask around.”

Based on his interview and the above statements, Jimmy was assigned a score of 4, modified dependence with minimal assistance on the leisure attitude subscale of the LCM. Thus, Jimmy improved his score from a 3 to 4. Jimmy would benefit from continued assistance to participation in leisure and to identify new leisure pursuits.

David

During his second, post-LE intervention interview, David continued to present with limited leisure interests. However, he did state community outings as his main leisure pursuit, showing initiative and a positive attitude toward community reintegration.

“Being out makes you feel like yourself, you know. It gets you out of the house and away from getting down on yourself or spending too much time thinking about your injury.”

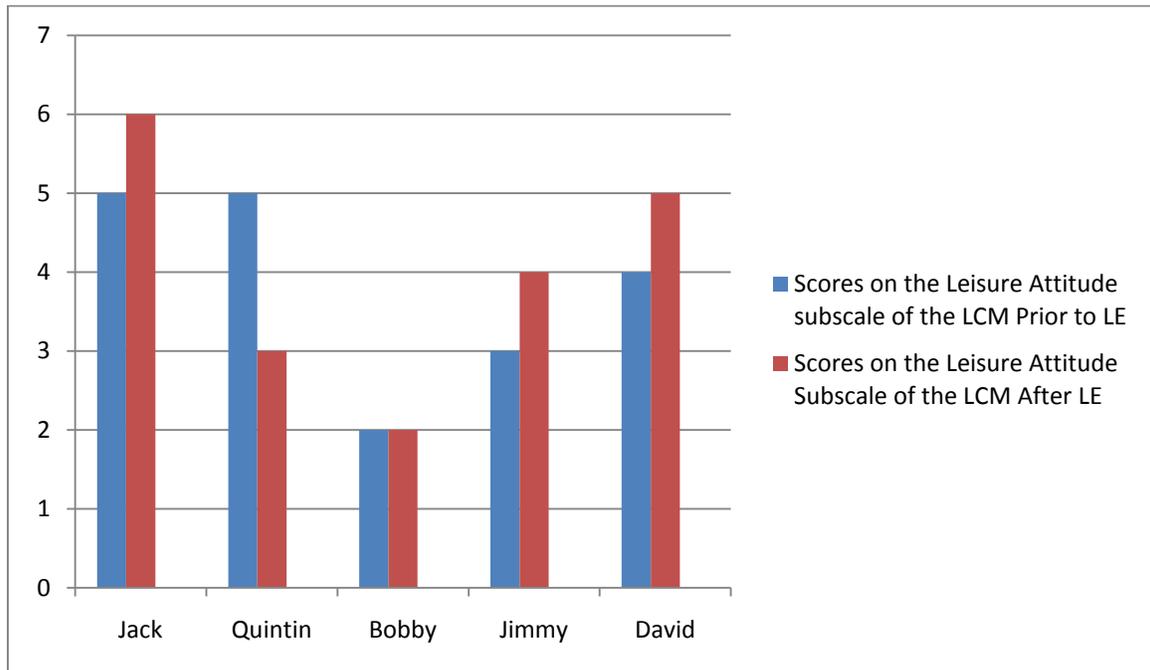
David was also able to demonstrate appropriate problem solving and reasoning when asked how to handle a low table at a restaurant:

“You can ask for another table, or leave, or ask for a tray to go in the wheelchair.”

While David demonstrated a positive attitude towards community participation, he never expressed interest in other leisure pursuits. Therefore, based on his interview and the above statements, David was assigned a score of 5, modified dependence on the leisure attitude subscale of the LCM. David would continue to benefit from TR treatment and LE interventions to address his limited leisure interests through novel recreation participation. David did improve his score on the leisure attitude subscale of the LCM by one point, from a 4 to a 5.

A summary of the scores on the leisure attitude subscale of the LCM can be found on table 3.

Table 3: Leisure Attitude Scores Before and After LE



Semi-Structured Interviews

Answers to the semi-structured interview questions for each participant are seen below in tables 4 through 8.

Table 4: Semi-Structured Interview Questions and Answers for Jack

Semi-Structured Interview Questions	Semi-Structured Interview Answer
<p>Tell me about yourself-how were you injured? Was recreation/leisure involved?</p> <p>How long have you been receiving treatment at Shepherd?</p>	<p>Jack Fenning. I will be 39 on Tuesday. I came into the military at 26, a lot older than most guys. But ah, found my way into Airforce Special Ops so I jump out of planes and dive and do crazy stuff like that. Got injured jumping out of an airplane. So I had a hard landing and hit my head. Injured my C-4. Got a Spinal Cord Injury from it.</p> <p>Two months, wait, when did I get here? No it's been a month and a half I think.</p>
<p>What was your perspective of spinal cord injury/disability before you were injured?</p> <p>Did you know someone or have experience with anyone that had a disability?</p>	<p>Never even thought about it.</p> <p>Yeah I mean with guys that have gotten injured. Some of my teammates were pretty messed up because of the war and stuff so. I just supported them. I never thought it would happen to me. So I didn't give it much thought.</p>
<p>Prior to your injury, did you value your leisure/recreation? Would you say it was a priority in your life?</p> <p>Has your view of leisure changed?</p> <p>Do you feel leisure is valuable as you recover from your injury?</p>	<p>No, I was more work oriented. I worked all the time which was fun but it was intense so when I would get off I would chill out.</p> <p>Yes. A little bit.</p> <p>That it can be fun. And it gets you out of the hospital. You know keeps your mind off of just focusing on the injury so much. So it's good for you physically and psychologically, I think. I figured out that there are a lot of things you can still do. Just cause you're paralyzed doesn't mean you can't do shit. Yesterday, I went and I was shooting guns.</p>
<p>Tell me about your experiences in the community so far. Have they been difficult or different then what you expected?</p>	<p>Not bad. I expected people to stare and all that. It doesn't bother me. You know. People have been pretty helpful for the most</p>

Table 5: Semi-Structured Interview Questions and Answers for Quintin

Semi-Structured Interview Questions	Semi-Structured Interview Answer
Tell me about yourself-how were you injured? Was recreation/leisure involved?	I am 18 and I am from Maxine, North Carolina.I was involved in a firetruck roll over. We were in the truck going to a call and we went around a curve and the water in the truck shifted and made the truck start sliding and the driver over corrected it and it made it flip.
How long have you been receiving treatment at Shepherd?	Tomorrow will be six weeks.
What was your perspective of spinal cord injury/disability before you were injured?	I never even thought about it.
Did you know someone or have experience with anyone that had a disability?	Nope
Prior to your injury, did you value your leisure/recreation?	It was what I liked to do. It relieved stress.
Would you say it was a priority in your life? Has your view of leisure changed?	Yes No. I still see it the same way.
Do you feel leisure is valuable as you recover from your injury?	I haven't hunted or fished or anything. But I have spent time with my girlfriend. I haven't drove. Spending time with my girlfriend helps out. Just lets me know she is here for me.
Tell me about your experiences in the community so far.	I was happy. Happy to get away from this place. I see these four walls, however many walls are in here, all the time. I get tired of it. I had fun.
Have they been difficult or different then what you expected?	No I had fun. I figured I would have fun.
Did you encounter problems in the community and how did you deal with them?	No.

<p>If you met someone who was newly injured, what would you tell them?</p>	<p>For me. Family. Having family here to support you helped out a lot. Keep in touch with your friends. Their worried about too. At first though, I didn't really call my friends at all. You know. They worried about me a lot. But talking to them helps out a lot. Just work hard at everything.</p>
<p>Would you offer them advice about being in the community?</p>	<p>No response</p>

Table 6: Semi-Structured Interview Questions and Answers for Jimmy

Semi-Structured Interview Questions	Semi-Structured Interview Answer
<p>Tell me about yourself-how were you injured? Was recreation/leisure involved?</p> <p>How long have you been receiving treatment at Shepherd?</p>	<p>I am Jimmy. I am 29 years old. I am from Macon, GA. I got injured on the job, whenever I came back from lunch I was sitting in my work van taking a telephone call and a tree limb fell out of a tree onto my van where I sit and it crushed my C-5 and cut my spinal cord at the C-6. I have use of my arms, no use of my hands and I am paralyzed from the nipple line down.</p> <p>6 months. I was in Shepherd inpatient then went home and then came back to the day program.</p>
<p>What was your perspective of spinal cord injury/disability before you were injured?</p> <p>Did you know someone or have experience with anyone that had a disability?</p>	<p>I hated it. I hated it for the people who had to go through it.</p> <p>I can't say that I have been around someone who was paralyzed before, but I have seen it. And I've always hated to see someone have to go through being paralyzed and not being able to walk.</p>
<p>Prior to your injury, did you value your leisure/recreation?</p> <p>Would you say it was a priority in your life?</p> <p>Has your view of leisure changed?</p> <p>Do you feel leisure is valuable as you recover from your injury?</p>	<p>I went hunting and fishing, um, play golf, video games.</p> <p>Oh yeah. I was active all the time. I stayed busy doing something.</p> <p>I guess it was like um, you know, clear your mind time. You know what I mean? It was time to yourself and that's what my leisure time was.</p> <p>No really yet. I have been that far into my accident to you know. Not really yet.</p>

<p>Tell me about your experiences in the community so far.</p> <p>Have they been difficult or different then what you expected?</p> <p>Did you encounter problems in the community and how did you deal with them?</p>	<p>It's good until you see folks staring. You know, what have I done for them to stare?</p> <p>I just go on. I mean that's something that they have to deal with.</p> <p>Yeah. There was one little restaurant in south Georgia that we went to they sold seafood and all that. And the doorways had a little threshold to get inside. But lucky I was low enough to the ground that we could actually get someone to give me a shove over the threshold to get inside. And going in and coming out was the same way.</p>
<p>If you met someone who was newly injured, what would you tell them?</p> <p>Would you offer them advice about being in the community?</p>	<p>I would tell them live life to the fullest. Don't sit and dwell.</p> <p>I guess don't be embarrassed you know.</p>

Table 7: Semi-Structured Interview Questions and Answers for Bobby

Semi-Structured Interview Questions	Semi-Structured Interview Answer
Tell me about yourself-how were you injured? Was recreation/leisure involved?	I am 50 years old. I was hunting and got hit by a SUV.
How long have you been receiving treatment at Shepherd?	I think I got here January 16 th .
What was your perspective of spinal cord injury/disability before you were injured?	I don't guess I thought about it.
Did you know someone or have experience with anyone that had a disability?	No
Prior to your injury, did you value your leisure/recreation?	Hunting, fishing and gardening. Just outdoors stuff.
Would you say it was a priority in your life?	It was one of my favorite things.
Has your view of leisure changed?	Yes. I can't do what I use to.
Do you feel leisure is valuable as you recover from your injury?	No. It has not really played a role.
Tell me about your experiences in the community so far.	I've gone outside once. We didn't go to store or a restaurant. We just kind of went out of the hospital and up the road a little.
Have they been difficult or different than what you expected?	I didn't care about. I guess it just depressed me. I guess I felt humiliated being in a chair and having people walk me around.
Did you encounter problems in the community and how did you deal with them?	No.

If you met someone who was newly injured, what would you tell them?	I don't know. I don't think I've dealt with my injury long enough to give advice.
Would you offer them advice about being in the community?	No response

Table 8: Semi-Structured Interview Questions and Answers for David

Semi-Structured Interview Questions	Semi-Structured Interview Answer
<p>Tell me about yourself-how were you injured? Was recreation/leisure involved?</p> <p>How long have you been receiving treatment at Shepherd?</p>	<p>I am David. I am 33 years old. I was in a roll-over car accident and got a C-6 injury.</p> <p>I have been at Shepherd for three months.</p>
<p>What was your perspective of spinal cord injury/disability before you were injured?</p> <p>Did you know someone or have experience with anyone that had a disability?</p>	<p>I never thought about it. Definitely never thought that it would happen to me.</p> <p>I don't know anyone with a spinal cord injury or with a disability.</p>
<p>Prior to your injury, did you value your leisure/recreation?</p> <p>Would you say it was a priority in your life?</p> <p>Has your view of leisure changed?</p> <p>Do you feel leisure is valuable as you recover from your injury?</p>	<p>I guess not. I worked a lot. That was my main priority. I liked going out, like to the movies and stuff on the weekends with my wife but that was about it.</p> <p>No, work was the priority.</p> <p>No. I am still going to be the same person I was and do the same things I was doing.</p> <p>I've gone out with my wife. She keeps me active and makes sure I get out of the hospital. So I've been able to get out and see what being in the community is like. I am not going to let this change me. I am still going to be me, you know? I guess participating in leisure has helped me realize that I can still be me.</p>
<p>Tell me about your experiences in the community so far.</p>	<p>Going out in the community has been fine for me. You know, people stare and stuff, but I don't care. I love being out. Especially getting out of here. You know, going out that's what I did before, so doing it now</p>

<p>Have they been difficult or different then what you expected?</p> <p>Did you encounter problems in the community and how did you deal with them?</p>	<p>makes me feel a little bit more like myself.</p> <p>I have had to learn to get around with curbs and stuff, but it hasn't been too hard. I am learning.</p> <p>No major problems no. I mean the first time being out that was a little scary but I got through it.</p>
<p>If you met someone who was newly injured, what would you tell them?</p> <p>Would you offer them advice about being in the community?</p>	<p>I would tell them that each day gets better. Every day you can make more progress. But it's up to you. If you stay in your room all the time, you will get depressed. So you have to get out there and try to be yourself again. Work hard and never give up. And remember that you are still you.</p> <p>The only thing I can say about being in the community is to not let other people get you down. People are going to stare and constantly ask if you need help. You can't let that bother you. You can't let that keep you from going out.</p>

Emergent Qualitative Themes

Data collected from the semi-structured interviews were analyzed and coded for themes as outlined in Merriam (2009). Words and or phrases were highlighted in each interview to examine similar patterns in conversation. Interviews were then cross examined to look for similar word choices and statements. From these cross examinations, two major themes arose: benefits of leisure participation and community reintegration post SCI and early in the stages of rehabilitation treatment. Each theme is discussed below.

Benefits of Leisure Participation

Therapeutic Recreation Specialists working in SCI rehabilitation aim at providing their clients with education regarding the importance of maintaining an active leisure lifestyle. In this study specifically, participants received this education during the LE intervention. During the LE intervention, emphasis is placed on the benefits of leisure participation after a SCI. To assess participant's knowledge of this topic each participant was asked to identify the benefits of participating in leisure after a SCI during interviews. Participants were asked to identify the negative effects could be if one did not participate in leisure and recreation after a SCI.

The physical benefits of leisure participation were reflected in interviews with 3 out of the 5 study participants.

“Sitting around too much, you know, probably will affect a lot of things. It could affect your bowel movements, your bladder, your blood pressure, and your skin-all kinds of things like that (Jack).”

“Physically it keeps you back where you were. It keeps you happy and fit. Just sitting around, you are going to get fat. And you will have health problems (Quintin).”

“I guess it would keep your strength up, muscle tone (Bobby).”

The emotional benefits of leisure participation were reflected in four out of the five interviews with study participants.

“I don’t want to be stuck in the house, or get to be depressed or feel sorry for yourself or take things out on your family. Being active makes you feel normal (David).”

“I think it is important to get out and about and do stuff not just be stuck in a room and feel guilty about your injury. And you know, go do stuff and live. It makes you feel better about yourself. I have always been active so it’s not like I am going to stop now (Jack).”

“It relieves stress, keeps you happy (Quintin).”

“It keeps my mind off my accident. It’s freeing my mind still (Jimmy).”

While four out of five participants were able to identify emotional benefits of leisure participation, one study participant was unable to state any benefits. When asked if he believed leisure participation had emotional benefits, he responded:

“It should. I can’t say that it does for me though (Bobby).”

Community Reintegration

Generally, research supports community reintegration as an important outcome of rehabilitation following a SCI (Forchheimer & Tate, 2004; Schonherr et al., 2005). It is important that individuals with a SCI have the opportunity to experience life in the community while receiving rehabilitation treatment. It is important for Therapeutic Recreation Specialists working in SCI rehabilitation to provide education on accessibility

and problems that individuals with SCI can encounter while in the community and provide opportunities for applicable community based problem solving. Participants in this study received all aforementioned education during community outings and the LE intervention.

Participants also received education on the Americans with Disabilities Act (ADA). To assess participant's knowledge of these topics individuals were asked to identify the areas of the ADA and what they would do if they felt that they were experiencing discrimination or limited accessibility in the community. They were asked to identify accessibility issues that they may encounter in the community and how they would solve them. Lastly, they were asked about transportation options available to them in their home community.

Four out of five participants were able to accurately identify the ADA after completing the LE intervention. Participants were also asked to identify the five major areas that the ADA covers for individuals with disabilities.

“Transportation, Accessibility. I don't know the rest (David).”

“Government, employment, transportation, public, and telecommunications (Jack).”

“They taught me GET PT where each letter is a word. So government places. What is it? I can't think of the E. I know the T is telecommunications. E is education. P is public and T is transportation (Quintin).”

“Employment, public, transportation, telecommunication and government (Jimmy).”

“I don't know if I can name them all. Government is one. Telecommunications. I can't think of the others (Bobby).”

Participants were asked to identify the steps that can be taken to change a public place that has limited accessibility for individuals with disabilities and/or utilizing wheelchairs.

“First you would go to the management and take small steps first. Then you can go to the government and make them listen (David).”

“You could talk to the manager. Or the owner. If that doesn’t work you could talk to the police. They have to get three complaints before they are forced to change (Quintin).”

“Call the justice department and if they get three complaints, they will send someone out and get put in the hurt locker. They’ll have to comply (Jack).”

“There are steps you can take to change it but I probably wouldn’t. I’ve been told the steps but I couldn’t tell you what they are (Bobby).”

“I actually had a problem in the community. There was one little restaurant in a small town in Georgia that we went to they sold seafood and all that. And the doorways had a little threshold to get inside. But lucky I was low enough to the ground that we could actually get someone to give me a shove over the threshold to get inside. And going in and coming out was the same way. So having done it, I know that you go to the manager or the owner first and then go high up like to the government if you need to (Jimmy).”

Lastly, participants were asked to list as many accessibility issues that they could encounter in the community and what transportation options are available to them in their home communities.

“No ramps, doors can be hard to open, can’t get under the table, bathroom is hard to get into, no handicap parking, and aisles in the store not wide enough for a wheelchair (David).”

“Door sizes, entries and exits, ramps, table heights, restrooms and stuff like that (Jack).”

“Curbs, doors that aren’t wide enough, steps-not having a ramp (Quintin).”

“Places might not have ramps. Restaurant tables not being the right height. Stores having too small of isles. Bathrooms without handicapped stalls (Bobby).”

“Doorways, like thresholds not being wide or even enough, no ramps, uneven sidewalks, low tables and un-accessible bathrooms (Jimmy).”

“We have buses, cabs, and companies that can pick you up (David).”

“Well I am getting a van provided for me and after six months we buy one. And then I am sure in Fort Worth, Texas there are taxis services that provide wheelchair accessible vans. The bus system, I think every fifth bus has to be wheelchair accessible. I know here in Atlanta that’s how it is (Jack).”

“Nothing. POV. Your own vehicle. I mean where I live, it’s straight country. Nobody comes out there, no buses, no vans. So it’s just up to you. I have family that can help me. But I am hoping, my doctor’s in a wheelchair and he is just as independent as anybody. And my mom’s boyfriend said that he has seen him outside get into a SUV and drive so hopefully I can get to that point so I can do what I want to do (Quintin).”

“I am not sure. We don’t have a bus system that I know of. Actually, I think we do, but I don’t know what it is. I think I’ve seen them pick up the elderly and stuff (Bobby).”

“I am from a small town so we don’t really have public transportation. But for me, I will be getting a lift van that my wife will drive me around in (Jimmy).”

CHAPTER FIVE

Discussion

The purpose of this study was to examine effectiveness of a LE intervention on knowledge of aspects of community reintegration and the relevance of leisure participation for individuals who have recently sustained SCI and were receiving treatment at a large rehabilitation hospital located in a metropolitan city in the southeastern United States. Study participants completed two LE interventions as part of their multi-disciplinary rehabilitation treatment. LE interventions covered leisure involvement and its benefits and the Americans with Disabilities Act and related aspects of community reintegration.

Upon completion of the LE interventions examined within this study, individuals were expected to understand (a) the benefits of leisure participation, (b) how leisure can be utilized to decrease medical complications secondary to their disability and (c) how they can access leisure opportunities and resources post discharge. Participants were expected to (d) identify the Americans with Disabilities Act and its five major areas, (e) accessibility issues that can be encountered in the community and ways to solve them and (f) available transportation options.

Participants

Jack

Of the five participants, Jack's life is the one that has changed most severely to the outside observer. Prior to his injury, Jack was an active member of the military and was employed as a para-jumper who made regular jumps from airplanes. As an individual

with a C-4 SCI, returning to his previous employment is not an option. Even in the face of immense change, Jack has maintained a positive attitude towards his future. During his interviews with the researcher, Jack expressed his determination to remain active.

During this study, Jack demonstrated a change in the way he viewed leisure. During his pre-LE intervention interview, Jack stated that leisure participation for him meant time out of the hospital setting and the opportunity to experience the world as an individual with a SCI. During post-LE intervention interview, Jack stated that leisure participation gave him the opportunity to live, feel better about himself and avoid feeling guilty about his injury. Through his participation in TR, Jack indicated that he rediscovered the enjoyment that comes from leisure. More importantly, through his involvement in TR services Jack indicated that he learned that paralysis does not have to limit what an individual can accomplish. His responses supported that TR became an opportunity of reintroduction to previous leisure interests. Lastly, TR participation provided Jack community experience and education regarding the ADA.

Prior to completion of LE interventions, Jack demonstrated a basic understanding of the ADA and how it protects individuals with disabilities. He was able to verbally identify four out of five of the areas that the ADA covers. When asked to identify accessibility issues that he could encounter in the community, Jack was only able to state two (e.g. no wheelchair ramps and small doorways). Jack also demonstrated limited ability to problem solve through three community based scenarios.

During his post LE intervention interview, Jack demonstrated carryover of the information presented in the LE intervention as he was able to verbally identify not only

the ADA but all five areas that it covers. Jack was able to identify 5 community accessibility issues (e.g. doorways being too small, entries and exits, ramps, table heights and small restrooms). Jack demonstrated improved problem solving when faced with accessibility issue questions.

Based on his pre-LE intervention interview and LE pre-test, Jack was assigned a score of 4 on the leisure awareness subscale of the LCM. This score reflected Jack's ability to verbalize benefits of leisure participation with minimal verbal cues from the researcher and his ability to identify three leisure interests. Upon completion of the LE intervention interview and LE post-test, Jack was assigned a score of 6 on the leisure awareness subscale of the LCM. This score reflected his ability to independently verbalize the benefits of leisure participation and his ability to identify five leisure interests.

Based on his pre-LE intervention interview and LE pre-test, Jack was assigned a score of 5 on the leisure attitude subscale of the LCM. This score reflected demonstration of a positive attitude towards leisure participation. However, Jack's score was lowered based on his limited view of future leisure participation. Upon completion of the LE intervention interview and LE post-test, Jack was assigned a score of 6 on the leisure attitude subscale of the LCM. This score reflected an increased attitude towards future leisure participation.

Quintin

Quintin was the youngest of all study participants. As a result of his accident, Quintin sustained a T-3 SCI. Similar to Jack, Quintin was in the military. Due to his

injury, Quintin stated that he expected to be medically discharged from service. Quintin stated that his leisure interests mainly consisted of spending time with his girlfriend. He expressed a positive attitude towards his future and demonstrated a positive attitude when he spoke about the possibility of getting back to driving.

During this study, Quintin's results indicated little change relative to his leisure interests. Prior to his injury, Quintin viewed leisure as a stress reliever. Post injury, his view did not change. Both prior to and upon completion of the LE intervention, Quintin stated that leisure after an SCI was important so that individuals can stay fit and avoid depression. While TR provided him the opportunity to learn how to adaptively play pool while using a wheelchair, Quintin demonstrated frustration with the challenge his injury presented while playing pool. For Quintin, his participation in TR seemed tied to the community and in increasing his knowledge of the ADA and community based problem solving.

During his pre-LE intervention interview, Quintin admitted to having no knowledge of the ADA. He was unable to identify any community accessibility issues. Similar to Jack, Quintin demonstrated limited ability to problem solve through three community based scenarios.

Following participation in the LE intervention, Quintin was able to identify the ADA. With minimal verbal cuing from the researcher, Quintin was able to identify the five main areas that the ADA covers for individuals with disabilities. He was also able to name three community accessibility issues (e.g. curbs, doors not being wide enough, steps or not having a ramp). Lastly, Quintin demonstrated increased ability to problem

solve through community accessibility issues. Throughout his interview, Quintin continued to benefit from minimal verbal cues from the researcher to answer questions correctly and effectively.

Based on his pre-LE intervention interview and LE pre-test, Quintin was assigned a score of 4 on the leisure awareness subscale of the LCM. This score reflected his ability to verbalize the benefits of leisure participation with minimal verbal cues from the researcher and his ability to identify three or more leisure interests. Upon completion of his post-LE intervention interview and LE post-test, Quintin was assigned a score of 5 on the leisure awareness subscale of the LCM. This score reflected an increased ability to independently verbalize the benefits of leisure participation. However, his score was lowered based on his verbalized frustration of participation in pre-injury leisure interests such as pool.

Based on his pre-LE intervention interview and LE pre-test, Quintin was assigned a score of 5 on the leisure attitude subscale of the LCM. This score reflected his positive attitude toward leisure participation. Upon completion of his post-LE intervention interview and LE-post test, Quintin was assigned a score of 3 on the leisure attitude subscale of the LCM based on his verbalized frustration of some adaptive leisure participation, marking a decrease in his overall leisure participation.

Jimmy

Out of all study participants, Jimmy had been receiving treatment the longest (twenty-four weeks). Jimmy was injured while at work sustaining a C-6 SCI and stated that he had no feeling from the nipple line down. During his pre-LE intervention

interview, Jimmy stated that his leisure interests included hunting, fishing and playing video games. Jimmy stated that his participation in TR provided an outlet for relieving stress and providing him with an escape from his injury. During both pre and post LE interviews, Jimmy remained focused on his physical limitations and viewed leisure participation as something to be concerned with once he had completed his recovery. Even six months post injury, Jimmy stated that he was not “far” enough out from his injury to consider leisure participation. Jimmy was also unable to demonstrate significant change in his knowledge related to the ADA.

During his pre-LE intervention interview, Jimmy stated that he had no previous knowledge of the ADA. He was unable to identify any community accessibility issues. Jimmy was able state solutions when given community accessibility issue questions (e.g. placing a tray in his lap while at a high table at a restaurant.) with minimal verbal cues from the researcher.

During his post-LE intervention interview, Jimmy remained unable to identify the ADA as the law that protects individuals with disabilities. He was however able to identify three community accessibility issues (e.g. bathrooms being too small, doorways not being wide enough, and a building having no ramps.) Based on this information, Jimmy would continue to benefit from LE and TR treatment to increase his knowledge of the ADA and community reintegration issues.

Based on his pre-LE intervention interview and LE pre-test, Jimmy was assigned a score of 3 on the leisure awareness subscale of the LCM. This score reflected Jimmy’s ability to verbalize the benefits of leisure with moderate verbal cues from the

researcher and his ability to state four leisure interests. Jimmy's score overall was lowered based on his statement that he was focused more on his physical recovery than his return to leisure participation. Based on his post-LE intervention interview and LE post-test, Jimmy was assigned a score of 4 on the leisure awareness subscale of the LCM. This reflected Jimmy's ability to verbalize the benefits of leisure participation with increasing independence. However, Jimmy's score was again lowered based on his continued focus on his physical recovery.

Based on his pre-LE intervention interview and LE pre-test, Jimmy was assigned a score of 3 on the leisure attitude subscale of the LCM. This score reflected his positive attitude toward leisure participation. However, his score was lowered as he required verbal cues to initiate participation in leisure activity. Based on his post-LE intervention interview and LE post-test, Jimmy was assigned a score of 4 on the leisure attitude subscale of the LCM. This score reflected his increased participation in community outings and leisure participation.

Bobby

Of the five participants, Bobby was the only one who was injured in a leisure related accident. Bobby was injured while on a hunting trip. It was during that trip that he sustained a C-3/4 SCI. Of all the participants, Bobby also verbalized the most negative attitude toward leisure. Throughout his interviews, Bobby remained focused on his limited physical abilities. While Bobby demonstrated having positive feelings towards leisure participation prior to his injury, his view of leisure post injury became negative and off-putting. While he acknowledged that leisure can carry positive benefits from

individuals, he was unable to see them for himself. Similarly, Bobby demonstrated limited change in knowledge related to the ADA and in his ability to become a self-advocate in the future.

During his pre-LE intervention interview, Bobby stated that he had no previous knowledge of the ADA or any other laws that protect individuals with disabilities. Bobby was unable to identify community accessibility issues and demonstrated difficulty when asked to problem through community scenarios.

During his post-LE intervention interview, Bobby acknowledged that there was a law that protected individuals with disabilities, however was unable to identify the ADA. Even when given verbal cues from the researcher, Bobby was still unable to identify the areas that the ADA covers for individuals with disabilities. He was able to acknowledge that there are steps to take when you encounter accessibility issues in the community, but stated that he would not take them. Bobby continued to demonstrate limited ability to problem solve through accessibility issues in the community. Based his interviews, Bobby would continue to benefit from TR treatment and continued LE.

Based on his pre-LE intervention interview and LE pre-test, Bobby was assigned a score of 2 on the leisure awareness subscale of the LCM. This score reflected his inability to identify any benefits of leisure participation and his ability to state three leisure interests. Based on his post-LE intervention interview and LE post-test, Bobby was assigned a score of 2 on the leisure awareness subscale of the LCM. This score continued to reflect his inability to verbalize any benefits of leisure participation.

Based on his pre-LE intervention interview and LE pre-test, Bobby was assigned a score of 2 on the leisure attitude subscale of the LCM. This score reflected his overall negative attitude towards his current and future leisure participation. Upon completion of his post-LE intervention interview and post-LE test, Bobby was again assigned a score of 2 on the leisure attitude subscale of the LCM. This score reflected the fact that Bobby's attitude towards leisure participation did not change because of the LE intervention.

David

David was injured in a roll-over motor vehicle accident. He sustained a C-6 SCI during his accident. During his interviews, he demonstrated limited leisure interests and stated that his main leisure interests included going out into the community to eat and see movies. Following completion of the LE intervention, David did not demonstrate a change in his leisure interests. While his limited leisure interests can be a cause for concern, his attitude towards leisure remained positive. David stated that he would not let his injury change his leisure participation and that he would continue to participate in his pre-injury activities and thus community outings. David did demonstrate significant change in his knowledge related to the ADA and his ability to problem solve with the community.

During his pre-LE intervention interview, David stated that he knew of a law that protects individuals with disabilities but was unable to recall its name. When asked the areas that it covered, David was able to identify two out of the five areas (e.g.

transportation and accessibility). David was able to demonstrate appropriate problem solving techniques when encountering accessibility issues in the community.

During his post-LE intervention interview, David was able to identify the ADA and all five areas that it protects individuals with disabilities. He was able to identify several accessibility issues that can be encountered in the community (e.g. no ramps, doors can be hard to open, can't fit under the table, bathroom is hard to get into, no handicap parking and aisles in the store not being wide enough for a wheelchair.) David continued to demonstrate the ability to effectively problem solve through accessibility issues in the community.

Based on his pre-LE intervention interview and LE pre-test, David was assigned a score of 4 on the leisure awareness subscale of the LCM. This score reflected his ability to verbalize the benefits of leisure participation with minimal cues from the researcher. However, David's score was lowered because of his limited leisure interests. Based on his post-LE intervention interview and LE post-test, David was assigned a score of 5 of the leisure awareness subscale of the LCM. This score reflected an increase in David's ability to independently identify benefits of leisure participation. However, his score was again lowered due to his limited leisure interests.

Based on his pre-LE intervention interview and LE pre-test, David was assigned a score of 4 on the leisure attitudes subscale of the LCM. This score reflected his positive attitude towards leisure participation, but was however lowered due to his limited leisure interests. Based on his post-LE intervention interview and LE post-test, David was assigned a score of 5 on the leisure attitude subscale of the LCM. This score reflected his

increased interest in participation in community outings. This score was again lowered due to his limited leisure interests.

Benefits of Leisure Participation

Leisure participation promotes an individual's fullest inclusion and participation within the physical and psychological environment (Stiens et al, 2002). However, leisure is not always a priority for individuals with SCI in the early stages of rehabilitation (Richards, 1982). Research with individuals with SCI has demonstrated the positive mental and physical effects of recreation participation post injury. Coyle, Shank, Kinney and Hutchins (1993) found that individuals with SCI who were actively involved in recreation post-injury reported higher levels of life satisfaction, higher quality social relationships and lower levels of depression. Not only can leisure promote these results, it has also been found to help prevent disease, promote health and maintain functional independence (Hansen, Forchheimer, Tate & Luera, 1998). With all of this in mind, it is important that individuals with SCI be encouraged to maintain an active leisure lifestyle after discharge from rehabilitation settings.

Individuals with SCI must have the possibility of continuing pre-injury interests or have the ability to find other pastimes that are adapted to their disability (Tasiemski, Kennedy & Gardner, 2006). In this study, individuals were provided with these opportunities through LE interventions and active leisure participation through TR treatment. Within this study, four out of five participants shared a mutual interest in hunting and other related outdoors activities. Through their TR treatment, three of the

five study participants were able to continue to experience shooting and target practice. In his interview, Jack reflected on the importance of this experience:

“Just cause you’re paralyzed doesn’t mean you can’t do shit. Yesterday, I went and I was shooting guns. Yeah. So. And that’s something I was into before so that’s gonna be cool. It’s something I will do when I get out of here (Jack).”

After a traumatic injury, individuals often experience elevated levels of stress. (Latimer, Ginis & Hicks, 2005). Stress can come in several forms post SCI. It can result from financial hardship, restricted employment opportunities, pain, change in relationships and social roles, and social stigma (Johnson et al., 1998). As a result of these experiences, chronic stress is often experienced by individuals with SCI. Because chronic stress is associated with poor health and well-being (Gerhart et al, 1999 & Rintala et al., 1998), individuals with SCI must be educated on strategies to combat and cope with stress. Participants in this study discussed utilizing leisure for stress relief, to create feelings of normalcy and as a distraction from their injury and situation.

“It (leisure) makes you feel normal (David).”

“It’s important to get out and do stuff, not just be stuck in a room and feel guilty about your injury. It makes you feel better about yourself. Overall, it (leisure) has helped me stay active and kept me from feeling down (Jack).”

“It relieves stress. It keeps you back where you were (Quintin).”

“It keeps you going. It keeps your mind off your injury and your accident (Jimmy).”

Community Reintegration

Community reintegration has long been an important goal for rehabilitation of individuals with SCI. Education and exposure to real life situations is crucial for individuals with SCI to navigate through this transition period and have successful community reintegration. Failure to acquire this knowledge can lead to symptoms that further reduce community opportunities, thus increasing isolation (Gontkovsky, Russum & Stokic, 2007). Through TR treatment and LE interventions, participants in this study were educated on the ADA and the protection it provides to individuals with disabilities, accessibility issues that can be encountered in the community and how to deal with these issues. Participants completed community outings to apply this education to the real world. Participants in this study expressed stigma concerns about being in the community.

“I expected people to stare and all that. It doesn’t bother me. You know. People have been pretty helpful for the most part, helpful. That’s cool (Jack).”

Future Research

This study examined the effectiveness of an LE intervention for a small convenience sample of individuals with SCI receiving treatment at a large rehabilitation hospital in the Southeastern United States. Future research must continue to examine the effectiveness of programming and interventions used within comprehensive treatment.

Replication of this study could help to further examine the effectiveness of LE interventions in other settings and with other populations. Extending the results of this study will benefit from more than a single group design. In addition, future research can

include an increased number of participants as well as employ an experimental design (e.g. control and participant groups). Research of this nature can potentially yield results with increased generalizability to the general population with SCI. Replication of this study using a secondary researcher, blind to the purpose of the study and the specific research questions can potentially strengthen findings. Therefore, data collected would not contain a bias created by a non-blind researcher. The use of additional similar data collection sites would provide greater confidence and understanding of the results.

Researchers examining LE interventions can ensure that participants experience the same environment while completing the interventions. With this in mind, future research on LE interventions can examine LE programming that occurs within a controlled environment, free of environmental distractions. Future examinations of LE interventions would also be strengthened if the interventions were taught by the same therapist for all participants. These procedures will contribute to consistent information delivery across all LE interventions.

Future research can incorporate the entire LCM to examine leisure participation and community involvement. Future research can examine use of the LCM on various populations (e.g. individuals with brain injury) and within different settings (e.g. nursing homes). Replicating this study using various populations and in different settings will potentially increase validity and reliability of the LCM itself and can potentially help TR professionals to examine the effectiveness of inventions used for treatment purposes.

Limitations of the Study

Results from this research include multiple limitations presented in order to fully interpret results. One limitation of this study was the small sample size. Due to the sample size of this study, caution is advised when making generalizations from this research. Having a larger sample size may have (a) yielded different and/or varied results and (b) may have provided generalization to the general population with SCI.

Another limitation of this study was that the researcher was not blind to the purpose of the research and the research questions while data were collected. The researcher may have had a subjective bias to record data in a manner that potentially reflected the researcher's perspective. Therefore, the change seen in study participants may not be representative of the change that individuals actually experienced.

Participants in this study were receiving rehabilitation treatment at the same hospital. Because of this, all participants completed the same LE interventions. However, participants may not have had identical experiences. LE interventions are taught by Therapeutic Recreation Specialists and the duty of teaching is rotated between different specialists weekly. Each LE intervention is taught from a Powerpoint presentation and the TR specialist is provided with a script. Even with the same teaching materials, each TR specialist can have their own teaching style that may affect participant learning.

LE interventions were taught in the middle of the day in a classroom like setting. Often during the interventions, the lights are dimmed to ensure that participants are able to see the presentation. These environmental factors can also have an effect on participant learning. Dim lighting can cause drowsiness in the participants. Internal and external

stimuli can affect participant's ability to process new information. For example, if an individual received troubling news before the LE intervention they may not be able to focus on the task at hand.

Another limitation of this study was the use of interviews for data collection. While interviews have advantages in that they can supply large volumes of in-depth data quickly and provide insight into the participant's perspectives and experiences, interviewees may not be willing to share information or may even offer false information. Interviews also require a great deal of time to conduct, transcribe and analyze (Ary et. al., 2006).

The final limitation regards the research design itself as data collection took place within two weeks or less of the completion of the LE intervention. With data collection taking place so close to the end of the intervention, the information learned may have been fresher in the participants mind. Therefore, data collected may not have been a true representation of what participants learned and actually retained.

Implications for Practice

Although the results of this study cannot be generalized to the SCI population, they have implications for the TR profession. Therapists are required to use sound measurement tools to help guide and assess the effectiveness of practice (Botner-Marigold & Miller, 2007). It will be helpful to use the LCM for TR assessment and practice. In this study, the leisure awareness and leisure attitudes subscales were shown to be effective assessment tools. Because the scoring method of the LCM is consistent with the Functional Independence Measure (FIM) used by disciplines such as occupational,

physical and speech therapy (Hamilton, Granger, Zielenny & Tashman, 1987), it provides TR specialists employed in rehabilitation facilities a consistent and acceptable means of reporting to these other disciplines. The LCM can be used for four purposes: (1) to identify initial levels of client functioning, (2) establish specific client goals related to the deficiencies found through the LCM, (3) to monitor client progress and (4) to measure outcomes and effectiveness of TR interventions and programming (Kloseck, Crilly, Ellis & Lammers, 1996). Overall, this study provided support for the use of the LCM during TR assessment.

This study demonstrated the importance of LE interventions for individuals with SCI receiving treatment in a rehabilitation setting. Through LE interventions and TR treatment, newly injured individuals have access to pre-morbid and new recreational activities and adaptive equipment to increase independence during leisure participation. Providing individuals with SCI the opportunity for active recreation participation early in the rehabilitation process is critical in the development of their post-injury perceptions of leisure involvement (Tasiemski, Kennedy & Gardner, 2006). If individuals develop positive leisure attitudes prior to discharge, they will be more likely to continue active leisure participation in the following months and years. Thus, they will be less likely to develop secondary disabilities or health related problems. Active individuals with SCI will also be less likely to develop symptoms of depression.

This study demonstrated the importance of community reintegration experiences to individuals with SCI. Community reintegration is an important outcome of rehabilitation following a traumatic injury (Schonnerr et al., 2005). Once an individual

with SCI completes the inpatient rehabilitation phase of their recovery, they are typically discharged back into the community to resume their life role (Forcheimer & Tate, 2004). Post injury, it is often difficult for individuals to re-establish themselves as community members (Anderson, Krajci & Vogel, 2003). Research has found that it is during this time that most individuals with SCI face many obstacles associated with their return into the community (Thompson, Coker & Krause, 2003). Education and exposure to real life situations is crucial for individuals with SCI to navigate through this transition period and have successful community reintegration. Thus, TR treatment becomes critical for community reintegration post SCI.

In this study, participants received education regarding accessibility issues that can occur in the community and ways to deal with them during the LE intervention. Through TR treatment, individuals were given the opportunity to experience the community as an individual with SCI and utilize problem solving in real-life situations. Results of this study demonstrated that participants viewed community reintegration experiences not only as a way to experience community-based learning, but as a way to leave the hospital and experience feelings of normalcy.

Currently for LE interventions for this facility, all individuals receiving TR treatment as a part of their rehabilitation process participate in LE. However, this study demonstrates the need for possible inclusion criteria. For example, Bobby demonstrated a negative attitude towards leisure participation post SCI and stated that leisure was no longer a priority for him. Individuals with a negative attitude towards leisure participation as an individual with SCI may not get the most out of participation in LE. Similar

individuals could benefit from additional time to cope with their injury before participating in TR treatment and LE interventions. Individuals with SCI must continue to be provided with opportunities for active leisure participation and community outings alongside LE interventions. Increased exposure to these opportunities during their rehabilitation process will increase the likelihood that the behaviors will continue post discharge.

Summary

This research examined the effectiveness of LE interventions utilized as a part of TR participation within the rehabilitation setting for individuals with SCI. The findings of this study demonstrated that LE interventions provide education on the benefits of leisure and the ADA and the importance of community reintegration. While not all participants in this study demonstrated a change in knowledge related to these areas, the benefit of LE interventions appear to be relevant to TR services in this specific setting. Through LE interventions and TR treatment, newly injured individuals have access to pre-morbid and new recreational activities, new leisure based knowledge and adaptive equipment to increase their independence during leisure activities. Through LE interventions and TR participation, participants in this study were able to verbalize the importance of leisure post SCI, demonstrate community based problem solving abilities, and verbalize understanding of the ADA and how to advocate for themselves and others with disabilities.

As this study was limited by a small sample size, no generalizations can be made to larger populations of individuals with SCI. Future research in this area would

benefit from a large sample size, use of the LCM in its entirety and an experimental research design. Overall, it is necessary for TR professionals to continue to assess their current treatment modalities including LE and strive to align them with the evolving needs of their clients.

APPENDICES

Appendix A

Agency-Specific Pre and Post LE Intervention Test

1. Is there a law that protects people with Disabilities? If so what is the name?
2. There are 5 areas of your life that the law protects you in. Please list them.
3. What do you do if you feel like you are being discriminated against or a place is not accessible to you or to others in wheelchairs? What are steps that you can take to make a change?
4. List as many accessibility issues that you might encounter in the community.
5. **Why is participating in recreation and leisure activities so important after having a Spinal Cord injury? How can it be bad for your body if you don't participate in recreation or leisure activities?**
6. List 3 solutions to the following:
 - a. The table at a restaurant is too low for you to fit underneath.
 - b. There are three stairs to get into the store that you are trying to get into.
 - c. It is time to do your IC and you cannot fit through the bathroom door
(going home is not an option)
7. After a person has a Spinal Cord Injury, does the amount of time that that person has to do maintenance, leisure and work change within the first year after their injury? If so how?
8. What transportation options are available to you in your home community?

Appendix B

Semi-Structured Interview Questions

1. Tell me about yourself-how were you injured? Was recreation/leisure involved?
 - a. How long have you been receiving treatment at Shepherd?

2. What was your perspective of spinal cord injury/disability before you were injured?
 - a. Did you know someone or have experience with anyone that had a disability?

3. Prior to your injury, did you value your leisure/recreation?
 - a. Would you say it was a priority in your life?
 - b. Has your view of leisure changed?
 - c. Do you feel leisure is valuable as you recover from your injury?

4. Tell me about your experiences in the community so far.
 - a. Have they been difficult or different than what you expected?
 - b. Did you encounter problems in the community and how did you deal with them?

5. If you met someone who was newly injured, what would you tell them?
 - a. Would you offer them advice about being in the community?

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