

IMPACT OF SPIRITUALITY ON OCCUPATIONAL SUCCESS OF
INDIVIDUALS WITH SPINAL CORD INJURY

by

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ABSTRACT

SIR ALLEN D. PEGUES

IMPACT OF SPIRITUALITY ON OCCUPATIONAL SUCCESS OF INDIVIDUALS
WITH SPINAL CORD INJURY

Under the direction of SUNEETHA MANYAM, PhD

The literature findings indicate that individuals with spinal cord injury (SCI) are less likely to obtain employment than people without disabilities. Challenges such as resiliency, spirituality, level of education, and the severity of the injury contribute to their lack of employment. Individuals with SCI should have the same opportunity to achieve occupational success as persons without disabilities. This study was designed to explore the following question: What impact does spirituality have on the occupational success of individuals with SCI?

The researcher used the Spiritual Well-Being Scale and Connor-Davidson Resilience Scale to measure each participant's level of resiliency and spirituality. Convenience sampling was used to collect data from 117 SCI individuals who responded to a Qualtrics survey. The data were analyzed using the ANOVA procedure to gain an understanding of how the independent variables impacted the occupational success of individuals with SCI.

The results revealed that resiliency and level of education had a statistically significant impact on occupational success of individuals with SCI. Individuals with SCI

with higher spirituality scores did not have as much occupational success as those with lower spirituality scores. Individuals with more education had more occupational success than individuals with SCI with less education. The severity of the injury did not have a statistically significant impact on occupational success of individuals with SCI.

Keywords: spinal cord injury, spirituality, resiliency, occupational success, severity of the injury, education

CHAPTER 1

STATEMENT OF THE PROBLEM

Individuals with spinal cord injury (SCI) face numerous challenges after they complete rehabilitation and return to their homes and communities (Anderson, Dumont, Azzaria, Bourdais, & Noreau, 2007). Anderson et al. (2007) reported the difficulty individuals with SCI experience to access buildings, including universities and places of employment. Some buildings have ramps but are missing rails on each side of the ramps to help individuals with SCI reach the entrance to the buildings. Some facilities have ramps at the back of the buildings rather than in the front. Some facilities have heavy doors, but no handicap button that individuals with SCI can push to enter and exit them with ease. Some buildings have bars in the bathroom, but the stalls are too narrow for wheelchairs to enter. Some workplaces lack enough handicap parking spaces, thus limiting opportunities for individuals with SCI to return to work post-injury. It is essential for society to create a wheelchair friendly environment for individuals with SCI to return to school and work (Bergmark, Westgren, & Asaba, 2011; Clifton, 2014).

In 2013, approximately 12,000 people per year in the United States were involved in a traumatic event that caused them to become disabled with a SCI (National Spinal Cord Injury Statistical Center [NSCISC], 2013). In 2018, the NSCISC reported the incidence of SCI increased to 17,700 annually. In 2018, there were approximately 288,000 individuals with SCI in the United States. At the turn of the 21st century,

individuals between 16–30 years of age were affected the most with SCI (NSCISC, 2001). Twenty years later, the average age of injury is 43 (NSCISC, 2020). The NSCISC (2018) reported that 78% of the cases in the United States were males.

In the 1990s, the leading cause of death among individuals with SCI younger than 55 years old was suicide (Dijkers, 1996). As of 2018, the leading causes of death were pneumonia and septicemia (NSCISC, 2018). Krause (1997) found that subjective well-being decreased in individuals with SCI despite consistent activity and rise in employment. Individuals with SCI are less likely than individuals without disabilities to obtain and keep an occupation (Bergmark et al., 2011; Crisp, 1990; Clifton, 2014; Gary et al., 2011; Pflaum, McCollister, Strauss, Shavelle, & DeVivo, 2006).

A person's life is affected after a traumatic event that results in being a wheelchair user (Bergmark et al., 2011; Dijkers, 2005; Elliot, 1999; Gary et al., 2011). Individuals with SCI must go through the grieving process over the loss of their ability to walk, (Craig & Hancock, 1998; Dickson et al., 2011; Krause & Edles, 2014; Nissim, 2003). Individuals with SCI may begin to lose interest in activities they enjoyed pre-injury (Babamohamadi, Dehghan-Nayeri, & Negarandeh, 2011; Rushton, Miller, Mortenson, & Garden, 2010; Schöenberg et al., 2014). Individuals with SCI may reduce the time they spend with people they socialized with pre-injury, which could be an effect of depression (Elliot & Frank, 1996; Gary et al., 2011; Malec & Neimeyer, 1983).

Resiliency Through Spirituality: Mind, Body, & Spirit

The journey to cope and adapt after a SCI can be overwhelming (Chun & Lee, 2013; Craig, Hancock, & Dickson, 1999; Dickson et al., 2011; Krause & Edles, 2014). Individuals with SCI must take control of their destiny and move forward toward life

satisfaction and occupational success (Anderson et al., 2007; Clifton, 2014). Resiliency and spirituality can help the mind, the body, and the spirit in that journey.

Resiliency through Spirituality

Spirituality can be used to increase resiliency in individuals with SCI (Clifton, 2014; Guest et al., 2015; White, Driver, & Warren, 2010). Guest et al. (2015) defined resiliency as the ability to adapt and cope with adversity or challenges. Walsh (2003) stated that spiritual counseling and an emphasis on family systems can have an impact on a person's well-being. Spirituality or spiritual practices that help improve a client's well-being may include prayer, forgiveness, yoga, meditation, music, song, worship dancing, and gratitude (Constantine, Myers, Kindaichi, & Moore, 2004). Latorre (2000) reported that persons who work with the spirit by practicing spiritual exercises, such as prayer and meditation, may discover insights and awareness that help them understand the big picture or larger whole. Meditation is a part of the mind, body, and spirit practices that can connect individuals with God to improve their well-being (Oh & Sarkisian, 2012).

The Holy Bible and the Qur'an discuss the three parts of a human: mind, body, and spirit. The body is defined as "the physical, biological, and chemical aspects of a human" (Fosarelli, 2002, p. 208). The mind is referred to as individuals' emotions and mental activities (Fosarelli, 2002). The spirit alludes to individuals' relationships with a higher power and individuals' relationships with others (Fosarelli, 2002). Individuals with SCI experience daily challenges that may cause them to feel weak, helpless, worthless, restless, overwhelmed, or heavily burdened. Spirituality and religion may be used to gain strength when experiencing adversity. Spirituality, or mind, body, and spiritual practices, can help individuals with SCI increase their strength, motivation, and

resiliency (Anderson et al., 2007; Clifton, 2014; Constantine et al., 2004; Guest et al., 2015; Oh & Sarkisian, 2012; Walsh, 2003; White et al., 2010).

Mind

Individuals who are more concerned with their life experiences, daily challenges, or living situations may begin to experience depression or anxiety due to negative thoughts. Fosarelli (2002) stated that negative thoughts could cause a negative impact on individuals' bodies. Similarly, individuals with SCI who pay too much attention to their flesh, bodies, or disabilities are more likely to feel depressed because they can no longer complete tasks or complete those tasks at the same pace post-injury.

Individuals who are more focused on spirituality may have more peace, more faith, more patience, more resilience, more perseverance, and more satisfaction with their lives despite not receiving the things they are seeking or hoping they achieve (Chun & Lee, 2013; Dijkers, 1996; Fosarelli, 2002; Nissim, 2003; Oh & Sarkisian, 2012; Rijavec, Jurcec, & Olcar, 2013; White et al., 2010). Rijavec et al. (2013) stated that forgiveness can increase the well-being of individuals with SCI by improving their life satisfaction. Individuals with SCI who emphasize spirituality are more likely to find peace and meaning in their lives despite the daily challenges they face (Dijkers, 1996; Fosarelli, 2002; Nissim, 2003; Rijavec et al., 2013).

Chun and Lee (2013) found that individuals with SCI who expressed gratitude to God for sparing their lives and giving them a second chance had higher life satisfaction and abilities to cope and adjust to adversity post-injury. Spirituality can also help individuals with SCI find ways to cope with their loss and increase their motivation or hope (Anderson et al., 2007; Brazeau & Davis, 2018; Fosarelli, 2002; Goldberg & Freed,

1982; Nissim, 2003; Oh & Sarkisian, 2012). Bonanno, Kennedy, Galatzer-Levy, Lude, and Elfström (2012) examined how individuals with a fighting spirit are more motivated to overcome obstacles and are better equipped to adapt to SCI. Goldberg and Freed (1982) examined participants 8 years post-injury to determine the best predictors for individuals with SCI to return to work. Goldberg and Freed reported that the level of motivation among individuals with SCI was one of the best predictors to return to work. Resiliency through spirituality can help increase faith, peace, life satisfaction, motivation, and resilience among individuals with SCI, which can help them find meaning and happiness and achieve occupational success (Anderson et al., 2007; Fosarelli, 2002; Nissim, 2003; Oh & Sarkisian, 2012; White et al., 2010).

Body

In the Holy Bible and the Qur'an, spiritual practices are used to heal individuals' bodies who have faith or believe. For example, John 5:8–9 (Authorized King James Version) said, "Jé-sus saith unto him, Rise, take up thy bed, and walk. And immediately the man was made whole, and took up his bed, and walked: and on the same day was the sabbath." Knight (1982) discussed that Jesus's healing ministry involved physical strategies, verbal directions, and recommendations. Jesus used multiple methods to heal individuals because each person was considered unique (Fosarelli, 2002). Fosarelli (2002) indicated that Jesus used the Word, prayer, touch, or forgiveness of sins as healing methods. Similarly, those healing methods may be used to improve the well-being of individuals with SCI and help them cope with their injuries. Benson (1975) concluded that prayer was designed to improve a person's health by providing emotional comfort. Prayer and encouraging self-talk also decreases stress during stressful situations (Belding,

Howard, McGuire, Schwartz, & Wilson, 2010; Benson, 1975; Oh & Sarkisian, 2012; White et al., 2010), which can help them cope or overcome daily obstacles (Bonanno et al., 2012; Chun & Lee, 2013; Rijavec et al., 2013).

Spirit

A person's life is profoundly affected by the traumatic event that results in life in a wheelchair (Babamohamadi et al., 2011; Brazeau & Davis, 2018). Individuals with SCI must grieve for the loss of their ability to walk. Spirituality can have a significant impact on how individuals with SCI adapt and strive for occupational success (Anderson et al., 2007; Nissim, 2003; Oh & Sarkisian, 2012). Nissim (2003) addressed this process with an examination of the effect of faith and spirituality in individuals with SCI related to life after 1 year post-injury. Nissim reported that numerous studies have shown that spirituality is one method used to help individuals with SCI cope and overcome their disabilities by adapting to environmental and psychological changes and challenges. Babamohamadi et al. (2011) agreed that spirituality was found to help individuals with SCI cope with their disability. Individuals with healthy coping skills, such as prayer and belief in God or a higher power, showed more life satisfaction and improvement in overall health (Belding et al., 2010; Benson, 1975; Nissim, 2003; Oh & Sarkisian, 2012; White et al., 2010). Spirituality can help individuals with SCI return to work by improving their health, coping skills, and ability to adapt to a new life in a wheelchair.

Purpose of the Study

The literature is limited regarding the impact of spirituality on the occupational success of individuals with SCI (Crisp, 1990; Fadyl & McPherson, 2010; Gary et al., 2011; Krause & Edles, 2014; NSCISC, 2020). Individuals who can obtain and keep an

occupation are happier (Clifton, 2014). The majority of individuals with SCI are not able to return to work due to the severity of their injury (Bergmark et al., 2011; Crisp, 1990; Fadyl & McPherson, 2010; Krause & Edles, 2014; Pflaum et al., 2006) or are forced to take an average of 4 years before returning to work full-time post-injury (Gary et al., 2011; Krause, 2003; Krause, Terza, Saunders, & Dismuke, 2010).

Most studies available discuss numerous factors that contribute to individuals with SCI not pursuing employment, but the studies do not explain in great detail about what can be done to increase this population's occupational success. Bergmark et al. (2011) reported several themes that emerged after an interview with eight individuals with SCI regarding the reasons they did not return to work post-injury. Bergmark et al. reported that a major reason individuals with SCI do not return to work post-injury is that their main priorities were to learn their bodies and to adapt to everyday life in a wheelchair before they could think about the possibility of returning to work. Some of the individuals with SCI could not return to work because they could no longer perform daily living tasks, such as dressing or bathing themselves (Bergmark et al., 2011).

The purpose of this study was to explore the impact resiliency, spirituality, level of education, and the severity of the injury had on the occupational success of individuals with SCI. Guest et al. (2015) discussed that faith, social support, hope, and coping skills are key ingredients to help individuals with SCI to overcome adversities. Guest et al. emphasized the importance of rehabilitation to help boost resilience among individuals with SCI so they can be more effective in overcoming daily obstacles. One way to boost resiliency is through spirituality or spiritual practices (Bonanno et al., 2012; Brazeau & Davis, 2018; Connor & Davidson, 2003; White et al., 2010). White et al. (2010) reported

that spirituality increased resiliency and helped individuals with SCI adjust to their injuries.

The study was designed to examine the impact of spirituality on occupational success of individuals with SCI to demonstrate the significance of spirituality to obtain and keep an occupation. The researcher used two instruments, the Spiritual Well-Being Scale (Paloutzian & Ellison, 1982) and the Connor-Davidson Resilience Scale (Connor & Davidson, 2003) to determine whether the impact of spirituality plays a greater role than other factors, including the individual's level of resiliency, the severity of the injury, and level of education for individuals with SCI to return to work post-injury. It was hypothesized that the participants who have higher spiritual and resiliency scores have greater occupational success.

Research Questions and Hypotheses

The ANOVA procedure was used to examine the impact resiliency, spirituality, level of education, and the severity of the injury had on the occupational success of individuals with SCI.

RQ1: What impact does resiliency have on the occupational success of individuals with SCI?

H_{A1}: Resiliency has an impact on the occupational success of individuals with SCI.

RQ2: What impact does spirituality have on the occupational success of individuals with SCI?

H_{A2}: Spirituality has an impact on the occupational success of individuals with SCI.

RQ3: What impact does the severity of the injury have on the occupational success of individuals with SCI?

H_{A3}: Severity of injury has an impact on the occupational success of individuals with SCI.

RQ4: What impact does the level of education have on the occupational success of individuals with SCI?

H_{A4}: Level of education has an impact on the occupational success of individuals with SCI.

Definitions of Variables

Level of education. For the purposes of the current study, participants were asked to indicate their highest level of education earned.

The severity of the injury. For the purpose of this study, the participants were classified as either a paraplegia (the loss of function of the lower half of the body with limited mobility of both legs) or quadriplegia (the loss of function of both arms and legs; Shaw & McMahon, 1985).

Spirituality. There is no universal meaning of spirituality (Oh & Sarkisian, 2012). Maier-Lorentz (2004) defined spirituality as the relationship between an individual and a higher power. For the purpose of this study, spirituality referred to the belief in, or the use of, spiritual exercises (e.g., prayer, reading scriptures, meditation, fasting, faith-building, forgiveness) to help individuals cope or overcome obstacles. In the current study, spirituality was measured by the Spiritual Well-Being Scale, a 20-item scale created to measure individuals' spirituality regardless of religion (Ellison, 1983).

Resiliency. Connor and Davidson (2003) defined resilience as a person's characteristics or abilities to thrive during adversity. For the purpose of this study, resiliency was referred to as not giving up striving toward a goal or multiple goals despite challenges. In the current study, resiliency was measured by the Connor-Davidson Resilience scale, a 25-item scale designed to evaluate resilience over the past month.

Occupational success. For the purpose of this study, occupational success was defined as obtaining and keeping an occupation for at least 6 months post-injury. The individual can have multiple occupations if he or she holds at least one occupation for at least 6 months.

Limitations

The study had two limitations. First, the researcher focused on the significance of spirituality, which is sometimes confused with religion. Spirituality does not have a universal definition (Oh & Sarkisian, 2012). Thus, spirituality can mean something different for each participant in this study. Maier-Lorentz (2004) insisted prayer can be used as a spiritual healing intervention for both spiritual and religious persons. It can be difficult to determine if the participants in this study achieved occupational success through religion or spiritual practices. Second, although the participants in this study were classified as paraplegia or quadriplegia, it was challenging to determine the severity of the injury among them. Participants may have the same classification, but the severity of their injury can be different. Some individuals with SCI who are classified as quadriplegia may have more function in their arms and hands than other quadriplegics (Anderson et al., 2007; Shaw & McMahon, 1985; Ville & Winance, 2006;).

The Significance of the Study

Individuals with SCI experience numerous challenges when they exit rehabilitation (Connor & Davidson, 2003; White et al., 2010), which may lead to depression, anxiety (Fosarelli, 2002; Mytko & Knight, 1999; Nissim, 2003; White et al., 2010), or unemployment (Crisp, 1990; Shaw & McMahon, 1985; Ville & Winance, 2006). Spiritual individuals are more likely to use coping strategies (e.g., prayer, meditation, faith) that alleviate strains such as depression, low self-esteem, and anxiety (Mytko & Knight, 1999). Maier-Lorentz (2004) and Fosarelli (2002) reported that healthcare providers are beginning to accept prayer as an alternative intervention for mind and body healing. Maier-Lorentz (2004) wrote that a mind is a powerful tool that may impact individuals' health based on whether they think positively or negatively. Nissim (2003) suggested that spirituality may be used as a coping strategy to help individuals with injury to alleviate their difficulties. This study may provide more knowledge about how spirituality can help individuals with SCI have a better opportunity to achieve occupational success.

A study with an emphasis on disabilities and why some individuals with SCI overcome while others do not may lead to a better understanding of people with disabilities. The study may add to the knowledge base concerning differences among individuals with SCI in their thinking and actions that contribute to whether they adapt and move forward with life post-injury. The study may provide mental health therapists with specific areas to address when working with individuals with SCI—to help them learn to overcome anger, depression, anxiety, low self-esteem, low motivation, and suicidal ideations—so they may increase their opportunities for occupational success

post-injury. The study may also provide readers with SCI with insightful information that may increase their motivation to achieve their life and occupational goals.

Summary

This study examined the factors that play a role in individuals with SCI in their decisions to return to work post-injury. Although individuals with SCI face challenges after they exit rehabilitation, this study may provide effective strategies to assist them with achieving occupational success. Spirituality was the major factor evaluated to determine its impact on occupational success of individuals with SCI. The researcher hypothesized that individuals with SCI who use spiritual practices have greater resilience to achieve occupational success.

CHAPTER 2

REVIEW OF THE LITERATURE

The researcher hypothesized that spirituality can help individuals with spinal cord injury (SCI) overcome their obstacles to gain occupational success. However, the review of the literature may reveal other factors that contribute to individuals with SCI to achieve occupational success. The researcher examined the literature to determine which factors play a significant role regarding the occupational success of individuals with SCI. The following is a list of themes found in the literature review: self-efficacy (Bandura, 1977, 2001; O'Sullivan & Strauser, 2009; Schieman & Campbell, 2001); disability rights (Block, Kroeger, & Loewen, 2002; Hugemark & Roman, 2002; Johnson, 2006); the factors that impact the quality of life (QOL) and life satisfaction, work life, and higher education for individuals with SCI after proceeding injury (Dijkers, 2005; Cairns, Adkins, & Scott, 1996; Connor & Furlong, 2007); and identify the gaps in the literature and the suggestions for future research mentioned by researchers (Crisp, 1990; Elliot, 1999; Pflaum et al., 2006; O'Sullivan & Strauser, 2009).

Theoretical Framework: Self-Efficacy

Self-efficacy is the nucleus of Bandura's social cognitive theory (Bandura, 1977, 2001; Schunk, 1995; Wilroy & Turner, 2016). Self-efficacy is defined as self-confidence to complete certain tasks that may influence a person's effort, motivation, activities, and achievement (Bandura, 1977). Motivation is a key construct of self-efficacy (Bandura,

1977). Bandura (1977) stated that confidence and motivate are key contributors for striving for success by achieving a goal or multiple goals. The two driving components of self-efficacy are cognitive and behavioral and are grounded on the concept that internal thoughts can affect behavioral change, but persons' experiences can alter their beliefs and behavior based on whether they were effective with performing a specific task (Guest et al., 2015; O'Sullivan & Strauser, 2009; Schunk, 1995). Bandura (1977) stated that efficacy expectations and outcome expectations are two concepts essential to the construct of self-efficacy, which can contribute to individuals' performances. Efficacy expectations are defined as individuals' beliefs that they can successfully perform the specific task to generate the outcome (Bandura, 1977). Outcome expectations were defined as individuals' cognitive thoughts about certain actions that will create a certain wish for results (Bandura, 1977; Guest et al., 2015). Individuals with SCI are more likely to engage in a particular activity if they believe they have the ability to perform the particular task—efficacy expectation; individuals with SCI think they can successfully perform the behaviors required to create the desired outcome—outcome expectations (Guest et al., 2015; O'Sullivan & Strauser, 2009; Schunk, 1995).

The actions of individuals with SCI are driven by efficacy expectations. Individuals with SCI who choose not to perform a certain task or decide not to complete the task have low self-efficacy (O'Sullivan & Strauser, 2009). Individuals with SCI with high self-efficacy are more determined and persistent with completing a task to achieve the desired outcome despite the obstacles they may face (Guest et al., 2015; O'Sullivan & Strauser, 2009; Schunk, 1995). However, efficacy expectations alone will not create the

desired outcome. Motivation is key to beginning and finishing a certain task (Bandura, 1977). Individuals with SCI can have the skills necessary to complete a particular task, but they must also have the motivation to use their ability to start and complete the task to achieve the desired outcome (O'Sullivan & Strauser, 2009; Schunk, 1995).

With the above information in mind, motivation is not the only factor that can impact self-efficacy. Demographic characteristics, such as a person's disability status, age, and educational level can affect self-efficacy as well (Guest et al., 2015; O'Sullivan & Strauser, 2009; Schunk, 1995). Schieman and Campbell (2001) reported that individuals with low education and disabled people scored lower on test for measurements of self-efficacy; however, individuals with greater empathy and greater social support scored higher on self-efficacy compared to those who scored lower. Therefore, it is important for people with a disability to have a high education and a support system to help motivate them to strive for success by increasing their self-efficacy (Guest et al., 2015; Schieman & Campbell, 2001).

Disability Rights

Gallagher (1990) wrote:

There is a Third Kingdom the land of the cripple. This place is no democracy; it is a dictatorship. The usual rights of citizenship do not apply here. A great wall surrounds this place, and most of what goes on within the wall is unknown to those outside it. (p. 1)

Individuals with SCI face numerous challenges regarding personal issues daily (e.g., ulcers, bladder infections, involuntary bowels, pain) due to their condition (Crisp, 1990; Gary et al., 2011; Nissim, 2003). Then, these individuals have added barriers when

they leave home and enter society (Clifton, 2014; Gary et al., 2011). Society has established traditional structures and systems that discriminate against disabled persons; therefore, discrimination is considered a systemic issue (Clifton, 2014; Hugemark & Roman, 2002; Loewen & Pollard, 2010). Individuals with SCI must go longer distances to cross the street or enter certain places because wheelchair ramps are placed in specific areas (Johnson, 2006). Loewen and Pollard (2010) discussed the many changes that have been made to provide the disabled person with equal rights, but institutions such as higher education have not done enough for equality for disabled people.

The disability rights movement helped influence policy to provide the same rights to individuals with disabilities as individuals without disabilities. The Americans with Disabilities Act changed society and helped meet the needs of individuals with SCI so they have equal opportunities to attain a higher education and obtain and keep employment (Block et al., 2002; Loewen & Pollard, 2010; Pflaum et al., 2006). The Americans with Disabilities Act and the National Institute on Disability and Rehabilitation Research focused on helping people with disabilities have the same opportunity to reach their goals by making environmental accommodations to make it possible to improve their life satisfaction (Whiteneck et al., 2004; Johnson, 2006; Loewen & Pollard, 2010). Raising awareness of the issues disabled persons experience is critical to gaining more knowledge of the employment process after individuals have a traumatic accident that leaves them as wheelchair users (Pflaum et al., 2006). Changing the environment to meet the needs of the disabled will help solve the issues disabled persons experience during interactions with society (Block et al., 2002).

Quality of Life and Life Satisfaction of Individuals With SCI

Numerous variables affect if individuals who become wheelchair users adapt and overcome their barriers by completing higher education, obtaining and keeping employment, and feeling satisfied with their lives (Chapin & Kewman, 2001; Dijkers, 2005; Pflaum et al., 2006; Ville & Winance, 2006). Persons with disabilities continue to face obstacles that prevent them from obtaining employment (Chapin & Holbert, 2009). The Harris Poll from 1968 to 2000 revealed that nondisabled persons have an unemployment rate of 19%; whereas, the unemployment rate of disabled persons was 68% (Chapin & Holbert, 2009; Crisp, 1990; Nissim, 2003). This section contains a discussion of the variables that impact whether individuals with SCI succeed in life by adapting and striving for success. The discussion includes factors mentioned by other researchers that impact the quality of life and life satisfaction (Clifton, 2014; Dijkers, 2005; Ville & Winance, 2006) and predict post-injury higher education and/or return to work (Chapin & Kewman, 2001; Crisp, 1990; Pflaum et al., 2006):

- level of education (DeJong, Branch, & Coreoran, 1984; DeVivo, Rutt, Stover, & Fine, 1987; Loewen & Pollard);
- the severity of the injury (Whiteneck et al., 2004; Shaw & McMahan, 1985; Ville & Winance, 2006);
- medical problems (Connor & Furlong, 2007; Fadyl & McPherson, 2010; Gary et al., 2011),
- age at injury (Crisp, 1990; Gary et al., 2011; Krause, 1998),
- length of rehabilitation (Crisp, 1990; Felice, Muthard, & Hamilton; Jellinek & Harvey, 1982),

- financial disincentives to work (Crisp, 1990; Shaw & McMahon, 1985),
- gender (DeVivo et al., 1987; Gary et al., 2011; Pflaum et al., 2006),
- race and ethnic disparities (Gary et al., 2011),
- problem-solving skills (Babamohamadi et al., 2011; DeVivo & Fine, 1982; Elliot, 1999),
- spirituality (Babamohamadi et al., 2011; Dijkers, 2005; Nissim, 2003),
- resiliency (Wilroy & Turner, 2016),
- hope for recovery (Hebrews 11:1, Authorized King James Version; Krause & Edles, 2014).

Level of Education

DeVivo et al. (1987) stated that researchers report more often about education as a predictor for employment post-injury than any other factor. Education was considered the most significant factor in obtaining employment (Bergmark et al., 2011; Pflaum et al., 2006; Tomassen, Post, & van Asbeck, 2000). However, Bergmark et al. (2011) stated that majority of individuals with SCI lack the academic training to return to work post-injury or to find employment they can perform post-injury. Individuals with SCI who have higher education have fewer adjustments regarding their value systems, occupations, and hobbies (Bergmark et al., 2011; Crisp, 1990; Fadyl & McPherson, 2010). More educated individuals with SCI have an advantage by having the ability to perform certain duties at work (Bergmark et al., 2011; Crisp, 1990; Fadyl & McPherson, 2010). DeJong et al. (1984) and Inge, Cimera, Revell, Wehman, and Seward (2015) stated that individuals with SCI with higher educational levels are more likely to obtain leadership roles.

Full-time or part-time students with disabilities face numerous challenges (Bergmark et al., 2011; Tomassen et al., 2000). Part-time students take longer to complete their studies because they must work as well as attend school (Bergmark et al., 2011). Bergmark et al. (2011) also indicated that individuals with SCI may experience anxiety due to medical complications, such as pain or pressure sores, which may contribute to poor studying performances that may have a negative impact on their grades. Education may become a financial burden if individuals with SCI do not complete their studies but still face the challenges of repaying their student loans (Bergmark et al., 2011).

The Severity of the Injury

The severity of injury does not predict if individuals with SCI return to work, but the severity of injury does determine the types of employment they obtain (Crisp, 1990). Ville and Winance (2006) reported that individuals with less severe SCI are more likely to be employed post-injury. Shaw and McMahon (1985) and Anderson et al. (2007) indicated that individuals with quadriplegia (loss of function of both arms and legs) are less likely to enter employment in machine trade factory, benchwork, and processing while individuals with paraplegia (loss of function of the lower half of the body with limited mobility of both legs) are more capable to enter employment that requires more use of their hands.

Medical Problems

Gary et al. (2011) indicated that the four main medical reasons associated with whether individuals with SCI complete higher education and/or obtain employment are the following: urinary tract infections, pressure sores (ulcers), stress or depression, and/or

pain. Urinary tract infections were one factor that predicted employment 3 years post-injury (DeVivo & Fine, 1982). Individuals with SCI who self-neglect (poor self-care skills) might have higher risks of physical complications that may result in medical problems, such as pressure sores (Macleod, 1988). Individuals with SCI who self-neglect appear to have fewer opportunities to attend higher education and/or obtain employment due to their declining health (Fadyl & McPherson, 2010; Macleod, 1988).

Individuals with SCI are more likely to work or complete higher education if they believe they can cope with performing daily tasks related to their condition, including taking a shower and dressing, self-catering, bowel management, and transportation (Fadyl & McPherson, 2010). In a qualitative study, Connor and Furlong (2007) measured stress for individuals with SCI using the Physical Disability Stress Scale. Persons affected by the loss of their ability to walk and becoming wheelchair users may face significant emotional and financial stress. Researchers aimed to alleviate stress by finding methods to help individuals with SCI cope with their disability. Individuals with SCI need to be measured for stress to determine the impact stress has on their health and QOL. Research revealed the negative impact stress has on the health and QOL for both the disabled and non-disabled population (Connor & Furlong, 2007).

Individuals with SCI experience different degrees of pain that can be long-term (Craig & Hancock, 1998), and may affect their ability to attend higher education or obtain employment post-injury. Pain may cause individuals with SCI to experience depression (Craig & Hancock, 1994). Cairns et al. (1996) also suggested that on-going pain may have a negative impact on individuals with SCI, such as reduced QOL.

Age at Injury

The age of the traumatic event that causes SCI is a significant factor regarding employment post-injury (DeVivo et al., 1987). Krause (1998) reported that people who are younger at the time of the traumatic event are more likely to adjust to life in a wheelchair, have a positive support group, and return to employment post-injury. The older individuals are, the less likely they will obtain employment post-injury. Individuals with SCI at the age of 30 or older were less likely to obtain employment while individuals with SCI younger than age 30 pre-injury were more likely to obtain employment (El Ghatit & Hanson, 1978). Reasons older persons have a lower return to work post-injury rate include their diminished ability to adapt to their condition and employers refuse to hire them as they are approaching retirement (Crisp, 1990). Although older persons with SCI face more challenges than younger persons to return to work, a majority of individuals with SCI regardless of their age take approximately 5 years before returning to work post-injury (Fadyl & McPherson, 2010; Krause, 2003).

Length of Rehabilitation

Most individuals with SCI do not immediately return to work post-injury (Crisp, 1990). Individuals with SCI need time to adjust to their condition and the community before they can return to work (Crisp, 1990). Bergmark et al. (2011) stated that it takes 2–3 years after an individual with SCI is discharged from the hospital before they relearn activities and even longer for a return to work. Jellinek and Harvey (1982) noted that vocational rehabilitation counselors who provide services to individuals with SCI throughout rehabilitation in the hospital increase the chances for individuals with SCI to reenter employment or school 3 years post-injury.

Financial Disincentives

Some individuals with SCI refuse to return to work or start work due to the fear of losing financial incentives (Shaw & McMahon, 1985). Individuals with SCI have more medical bills related to their condition and returning to work may cause them to lose those medical benefits. Crisp (1990) reported that it is a necessity for these individuals with SCI to remain unemployed to continue to receive medical benefits. The individuals most affected by this usually have a low educational level and lack the knowledge and skills to obtain high paying employment (Crisp, 1990; Fadyl & McPherson, 2010).

Gender

Women with quadriplegia, older women, and less educated women are less likely to return to work than women with paraplegia who are younger and well educated (DeVivo et al., 1987). Cook, Bolton, and Taparek (1981) found that women with SCI felt more optimistic than men with SCI regarding finding employment post-injury and were more likely to report satisfaction with their employment post-injury. Pflaum et al. (2006) revealed that gender was not a strong predictor of employment.

Race and Ethnic Disparities

Racial and ethnic disparities exist among individuals with SCI (Gary et al., 2011). White individuals with SCI have an overall better life after their injury than do individuals with SCI in racial and ethnic minority groups (Gary et al., 2011). Gary et al. (2011) found that minority individuals with SCI are at greater risk of unemployment, are less satisfied with life, and have a lower quality of life than White individuals with SCI. In comparison to White individuals with SCI, James, DeVivo, and Richards (1993) found that employment rates for African American individuals with SCI were 8.3% lower 1

year after injury and approximately 20% lower 6 years after injury. Krause and Anson (1996) reported that minorities with SCI, specifically African Americans, worked fewer hours per week (6.5 hours) than did Caucasians with SCI (10.3 hours).

Problem-Solving Skills

Elliot (1999) used a cognitive-behavioral approach to evaluate the degree of problem-solving skills individuals with SCI demonstrated to determine how well they were able to adjust to being wheelchair users. Individuals with SCI who had a high level of problem-solving skills adapted better than individuals with SCI who had difficulty finding solutions regarding their condition (Elliot, 1999). Individuals with SCI often deal with urinary tract infections and pressure sores (Babamohamadi et al., 2011). Individuals with SCI who have issues with urinary tract infections and have poor problem-solving skills have difficulty completing higher education and returning to work (DeVivo & Fine, 1982). Individuals with SCI who approached problems with a positive perspective were more effective problem solvers (Elliot, 1999). Individuals with SCI who had negative thoughts were less effective at solving problems and were more likely to experience difficulties controlling their mood.

Hope for Recovery

Some individuals after a traumatic event may have little faith or hope for recovery; whereas, others may have stronger faith or hope that motivates them to continue to pursue occupational success by attending higher education and obtaining employment post-injury (Clifton, 2014; Fadyl & McPherson, 2010; Krause & Edles, 2014). Individuals with SCI who have a high degree of hope for recovery are more motivated to work toward improving their lives and are significantly more satisfied with

their lives (Krause & Edles, 2014). Self-confidence or hope helped individuals with SCI cope or strive to overcome daily challenges; whereas, other individuals with SCI lack self-confidence or hope, which negatively impacts their determination to return to work post-injury (Fadyl & McPherson, 2010). Hope can be encouraged and learned, which can increase the motivation to overcome daily challenges that prevent some individuals with SCI from attending higher education and obtaining employment (Clifton, 2014).

Limitations and Gaps in the Literature

A specific limitation mentioned by numerous researchers was that larger sample sizes were needed when studying individuals with SCI (Connor & Furlong, 2007; Crisp, 1990; Pflaum et al., 2006). Connor and Furlong (2007) reported that larger sample sizes were needed for the measurements of stress to be consistent. Limitations discussed in Crisp's (1990) study were that the sample size was too small and focused more on persons with SCI who were employed rather than unemployed. Pflaum et al. (2006) reported that their study used datasets that were too small for results to represent the entire population of individuals with SCI and that SCI studies need to include more information about the length of post-injury employment. Pflaum et al. (2006) explained that their study included a bias toward disabled persons over- or underrepresenting their disabilities. Some disabled persons over-report their disability to receive more benefits (Pflaum et al., 2006). O'Sullivan and Strauser (2009) discussed the need for studies to measure the impact of race and racial identity self-efficacy.

Researcher's Personal Biases

The researcher relied on spirituality and religion to overcome obstacles when he became an individual with SCI. He strove for success by attending and completing

higher education and obtaining and keeping employment post-injury. The firm belief regarding resiliency through spirituality and religion to overcome obstacles may contribute to the thinking that all individuals with SCI who overcome impediments overcome them by relying heavily on resiliency through spirituality and religion when this may not be the case. Other factors (e.g., medical issues, the severity of the injury, age, duration of injury, level of education) possibly contribute to how some individuals with SCI overcome obstacles and achieve. The researcher must clearly define resiliency through spirituality and religion and be cautious about asking specific open-ended questions (e.g., How did God help you overcome obstacles to succeed via attend higher education and obtain employment post-injury?) that may lead the participants toward spirituality or religion.

Summary

Although spirituality has played a significant role in the occupational success of individuals with SCI, the literature revealed that other factors also help individuals with SCI in their decision to return to work post-injury. The researcher identified confidence and motivation as two main factors that are needed for individuals with SCI to overcome adversities to strive toward occupational success. The literature illustrated that internal ideations could impact an individual's behavior, such as the confidence to return to work and complete the duties of the occupation. This review also examined the rights of individuals with SCI and the importance for society to create a wheelchair friendly environment so individuals with SCI can return to the community and work post-injury. The review also identified the impact level of education, severity of the injury, age, gender, race, and problem-solving skills have on the occupational success of individuals

with SCI. By exploring the factors that can determine if individuals with SCI overcome their obstacles to strive toward occupational success, this study may provide a significant contribution to the literature in helping mental health therapists, rehabilitation facilities, and higher education to assist individuals with SCI to achieve occupational success. The next chapter contains a discussion of the methodologies the researcher used to examine the impact spirituality has on the occupational success of individuals with SCI.

CHAPTER 3

METHODOLOGY

This chapter contains a description of how the study was conducted. Presented in this chapter are the methodology, the sampling method, procedures for drawing a sample, sample size, the instrumentation, evaluation of the reliability and validity of the instruments, collection of the data, analysis of the data and procedures, and a description of the limitations. The researcher evaluated the impact of resiliency, spirituality, level of education, and severity of injury on the occupational success of individuals with SCI. This study was reviewed by Mercer University's Institutional Review Board to ensure the protection of all human participants and that all legal and ethical standards were followed (see Appendix A). All individuals with SCI who participated in this study signed a consent form before their participation in this study (see Appendix B).

Identification of Variables

The purpose of this study was to explore the impact resiliency, spirituality, level of education, and the severity of the injury had on the occupational success of individuals with SCI. The following list is a description of the variables used in this study:

- Resiliency was defined as an individual never giving up pursuing his or her goal(s) despite daily obstacles, as measured by the Connor-Davidson Resilience Scale.

- Spirituality referred to the belief in or the use of spiritual practices (e.g., faith-building, prayer, meditation, forgiveness, reading scriptures, fasting), as measured by the Spiritual Well-Being Scale.
- Level of education was defined as the highest level of education an individual with SCI had completed.
- The severity of the injury was the measure of how severely an individual with SCI is injured (paraplegia or quadriplegia).
- Occupational success was defined as having a part-time or full-time job for the previous 6 months.

Research Design

A quantitative approach was best suited for this study (Creswell, 2013). A quantitative approach allowed the researcher to measure how the independent variables impacted the occupational success of individuals with SCI. Additionally, the central purpose of analysis of variance (ANOVA) is to designate one dependent variable (occupational success) and four independent variables (resiliency, spirituality, level of education, and the severity of the injury) to increase the knowledge of how the independent variables impact the dependent variable (George & Mallery, 2014; Steinberg, 2011). The researcher selected the ANOVA procedure over regression or multivariate analysis of variance because the ANOVA allowed the researcher to measure the impact the four independent variables had on one dependent variable. Multivariate analysis of variance is used in analyses that have multiple dependent variables. Multiple regression is used to predict a continuous dependent variable. Occupational success was a dichotomous variable.

1. What impact does resiliency have on the occupational success of individuals with SCI?

H_{A1}: Resiliency has an impact on the occupational success of individuals with SCI.

2. What impact does spirituality have on the occupational success of individuals with SCI?

H_{A2}: Spirituality has an impact on the occupational success of individuals with SCI.

3. What impact does the severity of the injury have on the occupational success of individuals with SCI?

H_{A3}: Severity of injury has an impact on the occupational success of individuals with SCI.

4. What impact does the level of education have on the occupational success of individuals with SCI?

H_{A4}: Level of education has an impact on the occupational success of individuals with SCI.

Sampling

A power analysis was used to determine a sample size to increase the confidence the researcher would have in the conclusions drawn from the study. The statistical procedure was an analysis of variance, the level of significance (alpha, α) used was 0.05, and the value used for power was 0.8, meaning there is at least an 80% chance of correctly rejecting the null hypothesis. The researcher used a statistics power calculator

to determine the sample size. The power analysis determined that a sample size of approximately 115 individuals was needed to increase the generalizability of the study.

The sample included both males and females who were individuals with SCI. The participants consisted of individuals with SCI who were classified as paraplegia or quadriplegia. The sampling method used for the study was convenience sampling. Caldwell (2012) defined convenience sampling as selecting participants from a population based on the researcher's ease in contacting them.

The researcher collected responses from 130 individuals. As a result of attrition, 13 participants were excluded. Data from 117 SCI individuals were available for analysis: 62 individuals with a full-time or part-time job in the previous 6 months and 55 individuals with no job in the previous 6 months.

Instrumentation

The researcher wanted to explore why some individuals with SCI attend higher education and obtain occupation post-injury while others do not. To accomplish this, the researcher used two instruments: (a) the Spiritual Well-Being Scale (SWBS; Paloutzian & Ellison, 1982) and (b) the Connor-Davidson Resilience Scale (CD-RISC; Connor & Davidson, 2003). The following section provides an introduction and critique of these two data collection instruments.

Spiritual Well-Being Scale

The Spiritual Well-Being Scale (SWBS) is a 20-item scale created by Paloutzian and Ellison (1982) to measure an individual's spirituality (see Appendix C). The SWBS is designed to measure an individual's spirituality (Ellison, 1983; Khanna & Grayson, 2014; Nissim, 2003; Paloutzian & Ellison, 1982; You & Yoo, 2016). This scale rates the

20 items on a 6-point Likert scale, ranging from (1) *strongly disagree* to (6) *strongly agree*. Scores closer to 6 represent greater spiritual well-being (Paloutzian & Ellison, 1982).

The SWBS includes two subscales: a religious well-being subscale and an existential well-being subscale and a total spirituality scale (Paloutzian & Ellison, 1982). Paloutzian and Ellison (1982) reported that the religious well-being score measures the participant's perception of his or her relationship with God. Paloutzian and Ellison reported that the existential well-being score measures the participant's degree of life purpose and life satisfaction. De Jager Meezenbroek et al. (2012) reported that the total spirituality scale produced sufficient reliability, internal consistency, and convergent validity.

The SWBS had been proven reliable as evidenced by alpha reliability coefficients usually in the range of .80 or .90 (Khanna & Grayson, 2014). You and Yoo (2016) studied Korean adults and examined the psychometric characteristics and construct validity of the SWBS. You and Yoo concluded that the SWBS was reliable. Proeschold-Bell, Yang, Toth, Rivers, and Carder (2014) studied clergy's spiritual well-being and reported that the SWBS demonstrated high predictive and concurrent validity and high internal reliability.

Connor-Davidson Resilience Scale

The Connor-Davidson Resilience scale (CD-RISC) was developed by Connor and Davidson in 2003. The CD-RISC is a 25-item scale designed to measure resilience or the capability to deal or cope with adversity over the past month (see Appendix D). The instrument rates the 25 items on a 5-point Likert scale, ranging from (0) *not true at all* to

(4) *true nearly all the time* and ranges from 0–100, with higher scores representing greater resiliency. Connor and Davidson (2003) found that the CD-RISC illustrated “sound psychometric properties, with good internal consistency [0.89] and test-retest reliability [0.87]” (p. 81). Wu, Tan, and Liu (2017) examined the psychometric characteristics of the CD-RISC in regard to new employees in China and found it to have high internal consistency, consistent structure validity, and concurrent validity. However, Campbell-Sills and Stein (2007) reported that they had to revise the CD-RISC after a study on neuroticism revealed a negative correlation. Although they discussed mixed results about the psychometric properties in their particular study, they concluded after their revision that the CD-RISC has strong reliability (0.85) and validity (0.94).

Demographic Variables

Education was operationally defined as a continuous variable that ranged from (1) *some high school (no diploma)* to (7) *doctorate degree*. A higher score indicated more education. Severity of injury was defined as either (0) paraplegia or (1) quadriplegia. Questions seeking demographic information pertaining to gender, age, level of education, marital status, ethnicity, type of injury, and employment were also included (see Appendix E).

Data Collection and Analysis Procedures

The researcher used the online survey platform Qualtrics to collect data to measure spirituality and resiliency. This questionnaire took participants about 15 minutes to complete. However, individuals with SCI who have severe hand injuries may have taken longer to complete.

As a peer supporter at a brain and spinal cord injury specialist center located in a large southeastern metropolitan area in the United States, the researcher asked the peer supporter supervisor to email individuals with SCI who had been or were currently involved with peer support to ask them to complete the survey. The email provided a link to the online survey. The researcher also asked the director of the brain and spinal cord injury specialist center for permission to visit the facility and ask patients to complete the instruments.

The Counselor Education and Supervision Network - Listserv (CESNET-L) was also used to recruit participants. CESNET-L is listed as “a professional listserv for counselors, counselor educators, and supervisors,” whose purpose was to provide an open forum for discussion of issues and sharing of resources related to the profession (Jencius, 2019). Jencius (2019) reported that the website had over 3,400 members, primarily faculty in the role of counselor educators, a portion of doctoral students, and some practicing counselors and supervisors. The researcher shared the study’s link with professionals and doctoral students across the United States in an effort to find more potential participants.

Data collection lasted from July 2019 to April 2020. One hundred and thirty responses were collected during that period. The data were exported from the online survey platform with no identifying information. The researcher used IBM SPSS (v. 25) to analyze the data collected. The researcher used the ANOVA procedure to analyze four research questions. In this study, there were two outcomes—no job or a part-time or full-time job for the previous 6 months. The four independent variables (resiliency,

spirituality, level of education, and the severity of the injury) were hypothesized to have an impact on the dependent variable, occupational success.

Limitations

In the current study, the researcher's bias and lack of generalizability were limitations. The researcher has been a wheelchair user with SCI for 21 years. He relied on spirituality, religion, and resiliency to overcome his obstacles and strive for occupational success. He completed both higher education and obtained employment post-injury. His firm belief regarding spirituality and faith to overcome obstacles may contribute to the thinking that all individuals with SCI who overcome obstacles did so by relying heavily on spirituality and/or religion when this may not be the case.

Generalizability is also a limitation. The data for the current study were collected using convenience sampling. Due to the potential bias of this type of sampling technique by underrepresenting subgroups in the population of SCI individuals, the results of the analysis cannot be generalized to the target population. The bias of the convenience sample cannot be measured. Therefore, inferences about the results of the statistical analyses should be made only about the sample itself.

Informed Consent

The informed consent form was the first page of the Qualtrics survey. Implied consent was given when the participants provided responses to the questionnaire. The consent form contained information about the purpose of the study, that participation was voluntary, participants had the right to withdraw from the study at any time, and their private information would be kept confidential (see Appendix A).

Summary

Convenience sampling was used to collect data from 130 SCI individuals who responded to a Qualtrics survey. The questionnaire contained items measuring the resiliency and spirituality of the respondents. In addition to the two scales, the respondents answered questions that described their level of education and occupational success. Chapter 3 contains reliability and validity details of the instruments, a description of the limitations to the study, and how the data were analyzed to answer four research questions. Chapter 4 contains a description of the sample used in the data analysis and the results of the analysis of variance procedure used to answer three research questions.

CHAPTER 4

RESULTS

This chapter presents the results of the data analysis. A description of the sample is provided, the reliability of the resiliency and spirituality scales is presented, and the results of the analysis of the research questions are provided. The ANOVA procedure was used to determine the impact of four variables (resiliency, spirituality, severity of injury, and level of education) on occupational success. Analysis was performed using SPSS. After deletion of 13 cases with missing values, data from 117 SCI individuals were available for analysis: 62 individuals with a full-time or part-time job in the previous 6 months and 55 individuals with no job in the previous 6 months.

Description of the Sample

More than two thirds of the sample were men (71%) and three quarters (77%) of the individuals were paraplegics (see Table 1). More than half were between the ages of 18 and 34 (54%), another 29% of the respondents were between the ages of 35 and 44. Approximately half (55%) had college degrees, while almost 30% had a high school diploma. Sixty percent of the sample were single, while approximately another third (36%) were married. Fifty-four percent of the individuals with SCI had either a part-time or full-time job and had held it for the previous 6 months (see Figure 1). Half of the individuals in the sample were White (50%), another 17% were African American, and 11% were Latinx (see Figure 2).

Table 1

Description of the Sample (n = 117)

Characteristic	<i>n</i>	%
Gender		
Male	84	71.8
Female	33	28.2
Age		
18–24	14	12.0
25–34	49	41.9
35–44	34	29.1
45–54	17	14.5
55–64	3	2.6
Ethnicity		
African American/Black	20	17.1
Asian/Pacific Islander	5	4.3
Caucasian/White	28	49.6
Hispanic/Latinx	13	11.1
Multiracial	5	4.3
Other	16	13.7
Education		
Some high school	2	1.7
High school diploma	36	30.8
Some college credit, no degree	14	12.0
Associate degree	3	2.6
Bachelor's degree	57	48.7
Master's degree	5	4.3
Level of injury		
Paraplegia	90	76.9
Quadriplegia	27	23.1
Marital status		
Single	72	61.5
Married	42	35.9
Divorced	3	2.6
Employment status		
Full-time	6	5.1
Part-time	56	47.9
Unemployed	55	47.0
Employed 6 months or longer	63	53.8

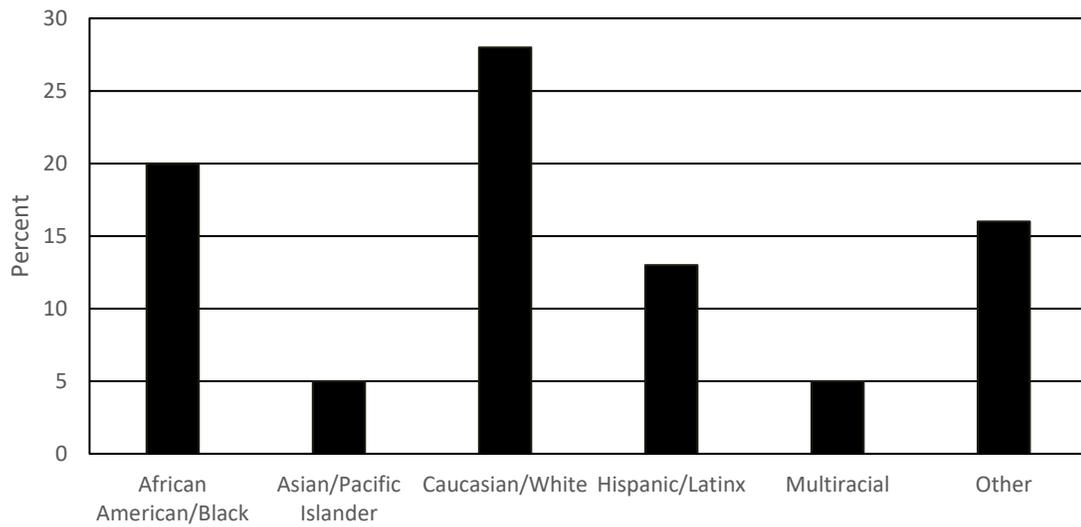


Figure 1. Ethnicity of the survey participants.

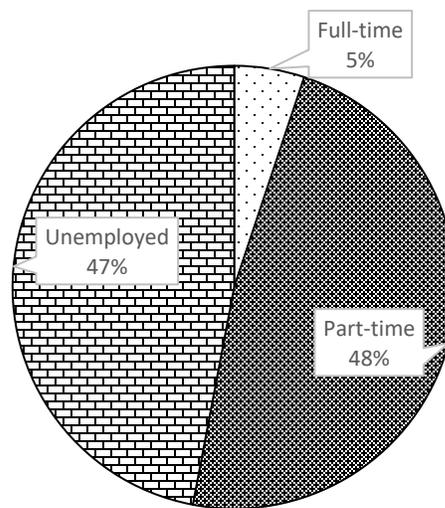


Figure 2. Employment status of survey participants.

Analysis of Research Questions

The researcher used the ANOVA procedure to answer four research questions:

1. What impact does resiliency have on the occupational success of individuals with SCI?

H_{A1}: Resiliency has an impact on the occupational success of individuals with SCI.

2. What impact does spirituality have on the occupational success of individuals with SCI?

H_{A2}: Spirituality has an impact on the occupational success of individuals with SCI.

3. What impact does the severity of the injury have on the occupational success of individuals with SCI?

H_{A3}: Severity of injury has an impact on the occupational success of individuals with SCI.

4. What impact does the level of education have on the occupational success of individuals with SCI?

H_{A4}: Level of education has an impact on the occupational success of individuals with SCI.

The descriptives of each variable by occupational success are presented in Table

2. These values were used in the ANOVA procedure. Individuals with SCI who had not held a job in the previous 6 months scored lower on resiliency ($M = 36.67, SD = 14.78$) than did those individuals with SCI who had held a job for the previous 6 months ($M = 49.44, SD = 11.82$). Inversely, spirituality scores were higher ($M = 2.68, SD = 1.15$) for individuals with SCI who had not held a job in the previous 6 months than those individuals with SCI who had held a job for the previous 6 months ($M = 1.99, SD = 1.05$). Individuals with SCI who had not held a job in the previous 6 months reported less education ($M = 3.96, SD = 1.48, \sim$ high school diploma to some college) than did

those individuals with SCI who had held a job for the previous 6 months ($M = 5.48$, $SD = 1.12$, ~ associates degree to bachelor's degree). There was approximately the same number of quadriplegic respondents ($M = 0.19$, $SD = 0.40$) with occupational success as there were paraplegic respondents ($M = 0.27$, $SD = 0.45$).

Table 2

Descriptive Statistics of Research Variables by Occupational Success

	No occupational success ($n = 55$)				Occupational success ($n = 62$)			
	<i>M</i>	<i>SD</i>	<i>Min</i>	<i>Max</i>	<i>M</i>	<i>SD</i>	<i>Min</i>	<i>Max</i>
Resiliency ^a	36.67	15.78	4.00	72.00	49.44	11.82	17.00	72.00
Spirituality ^b	2.68	1.15	1.00	5.35	1.99	1.05	1.00	3.80
Level of education ^c	3.96	1.48	1	7	5.48	1.12	3	7
Injury ^d	0.27	0.45	0	1	0.19	0.40	0	1

^a Resiliency is measured on a 5-point Likert scale, ranging from (0) *not true at all* to (4) *true nearly all the time*, and ranges from 0–100, with higher scores representing greater resiliency.

^b Spirituality is measured on a 6-point Likert scale, ranging from (1) *strongly disagree* to (6) *strongly agree*. Scores closer to 6 represent greater spiritual well-being.

^c Education ranged from (1) *some high school (no diploma)* to (7) *doctorate degree*. A higher score indicated more education.

^d Severity of injury was defined as either (0) paraplegia or (1) quadriplegia

The results of the ANOVA are presented in Table 3. Cohen's d was calculated to determine effect size. Cohen (1988) suggested that $d = 0.2$ was a small effect size, 0.5 represents a medium effect size, and 0.8 can be considered a large effect size.

Resiliency had a significant impact on occupational success [$F(1, 115) = 24.84$, $p < .01$]. Individuals who experienced occupational success had higher resiliency scores ($M = 49.44$) than did those with no occupational success ($M = 36.67$). The effect size was large ($d = 0.95$).

Table 3

Impact of Resiliency, Spirituality, Education, and Severity of Injury on Occupational Success

Variable	Source	SS	df	MS	F	p	Cohen's d
Resiliency	Between groups	4747.42	1	4747.42	24.84	< .01	0.95
	Within groups	21979.35	115	191.13			
	Total	26726.77	116				
Spirituality	Between groups	13.87	1	13.87	11.42	< .01	0.62
	Within groups	139.68	115	1.22			
	Total	153.55	116				
Level of education	Between groups	67.36	1	67.36	40.05	< .01	1.16
	Within groups	193.41	115	1.69			
	Total	260.77	116				
Severity of injury	Between groups	0.18	1	0.18	1.02	.31	0.19
	Within groups	20.59	115	0.18			
	Total	20.77	116				

Spirituality had a significant impact on occupational success [$F(1, 115) = 11.42, p < .01$]. Individuals who experienced occupational success had lower spirituality scores ($M = 1.99$) than did those with no occupational success ($M = 2.68$). The effect size was medium ($d = 0.62$).

Level of education had a significant impact on occupational success [$F(1, 115) = 40.05, p < .01$]. Individuals who experienced occupational success had more education ($M = 5.48$, ~ associates degree to bachelor's degree) than did those with no occupational success ($M = 3.96$, ~high school diploma to some college). The effect size was large ($d = 1.16$).

Severity of injury did not have an impact on occupational success [$F(1, 115) = 1.02, p = .31$]. There was approximately the same number of quadriplegic respondents with occupational success as there were paraplegic respondents. The effect size was small ($d = 0.19$).

Summary

Responses from 117 individuals with SCI were used to determine the impact resiliency, spirituality, level of injury, and education had on occupational success. The results of the analysis showed that resiliency and education had a positive impact on whether an individual with SCI had occupational success in the previous 6 months. Spirituality had a significant impact as well but was found to be higher in individuals with SCI who had not experienced occupational success in the previous 6 months than in individuals with SCI who had occupational success. Severity of injury did not have an impact of occupational success.

Chapter 5 contains a discussion of the study's results. Conclusions drawn for those results and implications for individuals with SCI are also presented. Recommendation for further research are offered.

CHAPTER 5

DISCUSSION, CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

This chapter contains a discussion of the results of the study. The purpose of this study was to examine the impact resiliency, spirituality, level of education, and the severity of the injury had on the occupational success of individuals with SCI. The results of the ANOVA indicated that resiliency, spirituality, and level of education had an impact on whether an individual with SCI held a part-time or full-time job for at least 6 months post-injury. Although the results of the ANOVA demonstrated that spirituality had a significant impact on the occupational success of individuals with SCI, individuals in this sample with higher spirituality had less occupational success than those who had lower spirituality. The severity of the injury did not have a significant impact on the occupational success of individuals with SCI.

Discussion

The section contains a discussion of how resiliency, spirituality, level of education, and severity of the injury affected the occupational success of 117 individuals with SCI. The discussion centers around how the results of the current study affirm or contradict previous research about individuals with SCI.

Resiliency

A traumatic event that causes an individual to have a spinal cord injury is life changing. Individuals with SCI may face numerous adversities (e.g., medical issues,

financial issues, lack of problem-solving skills) during their recovery (Anderson et al., 2007; Clifton, 2104; Nissim, 2003). Learning to cope and adapt to a life in a wheelchair takes hope, confidence, motivation, and resiliency. The journey for individuals with SCI to return to work is difficult. Bergmark et al. (2011) found that individuals with SCI could not think about returning to work without first learning their bodies' limitations and to adapt to everyday life in a wheelchair. The results of the ANOVA revealed that resiliency had a statistically significant impact on whether an individual with SCI had held a part-time or full-time job for at least 6 months post-injury [$F(1, 115) = 24.84, p < .01, d = 0.95$]. It appears that individuals who chose not to give up by learning to cope with their injury had a greater chance to have occupational success than those who failed to adapt to a lifestyle in a wheelchair. Bonanno et al. (2012) concluded that individuals with a fighting spirit have greater motivation to overcome adversities and are better qualified to adapt to SCI.

Spirituality

The researcher hypothesized that the participants who scored higher on the Spiritual Well-Being Scale would have occupational success. The results of this study illustrated that spirituality had a significant impact on occupational success for individuals with SCI. However, the results of the ANOVA indicated that spirituality was found to be higher in individuals with SCI who had not obtained occupational success in the previous 6 months [$F(1, 115) = 11.42, p < .01, d = 0.62$]. Chun and Lee (2013) revealed that individuals who emphasize spirituality may have more hope, more peace, more faith, more patience, more resilience, more perseverance, and more life satisfaction despite not receiving the things they are seeking or hoping they achieve, such as a job.

Guest et al. (2015) concluded that individuals with SCI who heavily relied on spirituality (e.g., prayer, meditation, reading scriptures, forgiveness, gratitude, faith-building) became more resilient as they learned to cope with numerous challenges (e.g., pain, pressure sores, financial issues, urinary tract infections). Oh and Sarkisian (2012) indicated that individuals with good coping skills and using such things as prayer and faith in God or a higher power reported more life satisfaction and boost in overall health (Belding et al., 2010; Benson, 1975; Nissim, 2003; Oh & Sarkisian, 2012; White et al., 2010). However, the above authors did not conclude that high spirituality would help individuals with SCI have occupational success.

Level of Education

Level of education has been considered the most significant predictor of occupational success (Bergmark et al., 2011; Pflaum et al., 2006; Tomassen et al., 2000). Bergmark et al. (2011) reported that education was considered the most significant factor in obtaining employment. However, Bergmark et al. reported that a majority of individuals with SCI lack the academic training to return to work post-injury or to find employment they can execute post-injury. Fadyl and McPherson (2010) reported that individuals with SCI who have more education have fewer adjustments than individuals with less education regarding their occupations and hobbies.

The results of this study revealed similar results. The level of education had a statistically significant impact on occupational success of individuals with SCI [$F(1, 115) = 40.05, p < .01, d = 1.16$]. Individuals with SCI with some college or a college degree are more likely to obtain and keep a part-time or full-time job for at least 6 months post-injury than those with a high school diploma or less. Inge et al. (2015) reported that more

educated individuals with SCI also have a greater opportunity to hold leadership roles that may increase their income. Thus, individuals with SCI with some college or a college degree have an advantage because they have more abilities to execute necessary responsibilities at work and earn higher incomes (Bergmark et al., 2011; Crisp, 1990; Fadyl & McPherson, 2010).

The Severity of the Injury

The severity of the injury can be a major barrier for occupational success for individuals with SCI. Individuals with SCI may believe they cannot complete certain tasks to obtain or keep a part-time or full-time job. Individuals with SCI who rely on others for help or assistance to complete daily tasks (e.g., bathing, bathroom issues, dressing) may allow fear or lack of confidence to prevent them from pursuing occupational success (Bergmark et al., 2011; Crisp, 1990; Gary et al., 2011; Pflaum et al., 2006). Valtonen, Karlsson, Alaranta, and ViikariJuntura (2006) wrote that the severity of the injury impacts whether both men (70%) and women (50%) with a SCI return to work. Ville and Winance (2006) reported that individuals with less severe SCI [paraplegics] are more likely to be employed post-injury.

In contrast, Krause and Edles (2014) wrote that the severity of the injury did not have an impact on occupational success. Whiteneck et al. (2004) also reported that the severity of the injury did not have a significant impact on occupational success of individuals with SCI. Other factors, such as education, had more impact on whether individuals with SCI returned to work post-injury (Whiteneck et al., 2004).

This study demonstrated similar results. The results of the ANOVA indicated that the severity of the injury did not have a statistically significant impact on occupational

success of individuals with SCI [$F(1, 115) = 1.02, p = .31, d = 0.19$]. Although individuals with SCI who were classified as paraplegic have more ability to complete certain tasks than quadriplegics (Anderson et al., 2007), results demonstrated that the level of their injury did not impact their ability to hold a part-time or full-time job in the previous 6 months.

Conclusions

The reason for undertaking this study was to evaluate the impact resiliency, spirituality, level of education, and severity of SCI injury had on occupational success for individuals with SCI. It was hypothesized that resiliency and spirituality would have a statistically significant impact on occupational success of individuals with SCI. This study concluded that resiliency, spirituality, and level of education had a statistically significant impact on occupational success for this population. However, it was surprising to find that individuals with SCI who scored higher on the SWBS had less occupational success than those who scored lower on the SWBS.

Implications

The results of the ANOVA revealed that resiliency, spirituality, and the level of education had a statistically significant impact on occupational success of individuals with SCI. Rehabilitation counselors can include a spirituality component to their programs to help individuals with SCI learn to cope with their daily stressors and to improve their resiliency. Spirituality may also help individuals with SCI increase their hope or faith in their abilities to have occupational success (Guest et al., 2015).

Individuals with SCI have barriers when they leave home and enter the society (Clifton, 2014; Gary et al., 2011; Johnson, 2006), which may negatively impact their

opportunities to have higher education and occupational success post-injury. Loewen and Pollard (2010) reported that society has not made enough changes to help more individuals with SCI have equality as individuals without disabilities by creating an environment for individuals with disabilities to attend higher education. Rehabilitation counselors can help individuals with SCI learn to advocate for themselves to make attending higher education and having occupational success possible. For instance, individuals with SCI must adapt to a new lifestyle in a wheelchair and may lack awareness about their disability rights. Rehabilitation counselors can help educate individuals with SCI about their disability rights and how to advocate for change to attend higher education and have occupational success (Block et al., 2002; Loewen & Pollard, 2010; Pflaum et al., 2006).

Individuals with SCI who return to work and attend higher education post-injury face numerous obstacles (e.g., pressure sores, pain, stress, depression, financial issues) as well (Bergmark et al., 2011; Tomassen et al., 2000). Bergmark et al. (2011) indicated that individuals with SCI who attend college at least part-time and have an occupation may take longer to complete their studies, which may increase anxiety and/or depression and negatively impact their grades. Mental health counselors are needed to help individuals with SCI explore and process their anxiety and/or depression to improve their opportunities to obtain and keep a part-time or full-time occupation for at least 6 months (Clifton, 2014; Hugemark & Roman, 2002; Loewen & Pollard, 2010).

Mental health counselors can take a more holistic approach by including spiritual counseling that emphasizes family systems to increase hope, confidence, motivation, and support. Mytko and Knight (1999) wrote that spiritual individuals are more likely to

make use of coping strategies (e.g., prayer, meditation, and faith) that alleviate burdens, such as depression, low self-esteem, and anxiety. Spirituality can also be used to provide individuals with SCI a connection to God, Allah, or a higher power to empower them to endure and persevere through their difficult journey (e.g., anxiety, depression, suicidal ideations) to achieve a college degree and occupational success.

Recommendations

The first recommendation for future studies is to add a qualitative component to examine the opinions of the participants regarding whether spirituality significantly helped them obtain occupational success and how they used spirituality to help them cope with their stressors and return to work post-injury. Second, future studies should use a different sampling method other than a convenience sample in order to include more quadriplegics, females, and minorities rather than mostly Caucasian males. Third, there is a need for future studies to learn more about the types of jobs paraplegics and quadriplegics obtain and keep. Finally, the SWBS appears to measure more about religion or an individual's relationship with God than spirituality (Khanna & Grayson, 2014; Nissim, 2003; Paloutzian & Ellison, 1982; You & Yoo, 2016). Thus, the researcher recommends that future studies use another instrument that measures more about spirituality or the use of spiritual exercises (e.g., prayer, meditation, faith-building, fasting, reading scriptures, positive thinking, forgiveness).

Summary

The overall hypothesis of this study was that resiliency, spirituality, level of education, and severity of SCI injury would have a statistically significant impact on occupational success for individuals with SCI. Individuals with SCI who are resilient and

have some college or a college degree have greater occupational success than those who had lower resiliency scores or have less education. Individuals with SCI with higher spirituality scores did not have as much occupational success as those with lower spirituality scores. The severity of the injury did not have an impact on occupational success for individuals with SCI. Although quadriplegics and paraplegics chose jobs based on their abilities to perform certain duties, the severity of the injury did not have an impact on their occupational success.

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APPENDICES

APPENDIX A
IRB APPLICATION AND APPROVALS

MERCER
UNIVERSITY

*Institutional Review Board
For Research Involving Human Subjects*

Thursday, November 8, 2018

Mr. Sir Allen Dupree Pegues
3001 Mercer University Dr.
Penfield College of Mercer University
Atlanta, GA 30341

RE: Impact of Spirituality on Occupational Success of Individuals with Spinal Cord Injury (H1811287)

Dear Mr. Pegues:

On behalf of Mercer University's Institutional Review Board for Human Subjects Research, your application submitted on 26-Oct-2018 for the above referenced protocol was reviewed in accordance with Federal Regulations [21 CFR 56.110\(b\)](#) and [45 CFR 46.110\(b\)](#) (for expedited review) and was approved under category(ies) 07 per 63 FR 60364.

Your application was approved for one year of study on 08-Nov-2018. The protocol expires on 07-Nov-2019. If the study continues beyond one year, it must be re-evaluated by the IRB Committee.

Item(s) Approved:

New application for counseling research study using surveys to study the impact of spirituality on the occupational success of individuals with spinal cord injury.

NOTE: You **MUST** report to the committee when the protocol is initiated. Report to the Committee immediately any changes in the protocol or consent form and **ALL** accidents, injuries, and serious or unexpected adverse events that occur to your subjects as a result of this study.

We at the IRB and the Office of Research Compliance are dedicated to providing the best service to our research community. As one of our investigators, we value your feedback and ask that you please take a moment to complete our [Satisfaction Survey](#) and help us to improve the quality of our service.

It has been a pleasure working with you and we wish you much success with your project! If you need any further assistance, please feel free to contact our office.

Respectfully,



Ava Chambliss-Richardson, Ph.D., CIP, CIM.
Director of Research Compliance
Member
Institutional Review Board

"Mercer University has adopted and agrees to conduct its clinical research studies in accordance with the International Conference on Harmonization's (ICH) Guidelines for Good Clinical Practice."

APPENDIX B
INFORMED CONSENT LETTER

I have been asked to participate in a research study to evaluate the factors that impact my decision to strive toward occupational success by obtaining and keeping employment post-injury. I was asked to be a possible participant because I am an individual with a spinal cord injury (SCI). A total of 120 people has been invited to participate in this study. The purpose of this study is to explore and understand the factors and differences between individuals with SCI in their thinking, and actions that impact whether they overcome obstacles to succeed despite their living conditions.

If I agree to be in this study, I will be asked to answer personal questions about the factors that impact whether or not I have overcome obstacles to strive for occupational success by obtaining and keeping employment post-injury. My answers from the three surveys will be stored in a file cabinet with a lock. My name will not be used in this study. This study will not take more than an hour to complete; however, participants will be allowed more time if needed. The risk associated with this study is recalling personal things that have occurred in daily living that may contribute to obtaining employment post-injury. The benefits of participation are to help improve the lives of individuals with SCI by discovering the factors that prevent them from occupational success by obtaining employment post-injury.

This study is anonymous. The information received will be used in the study without mentioning my name or any other information that will explain who I am. The records of this study will be kept private. No words linking me to the survey will be included in any report that might be published. Research records will be stored securely, and only the chair of the committee and the committee members will have access to the files. The completed surveys will be shredded after the researcher transfers the information into a word document. I have the right to get a summary of the results of this research if I would like to have them.

I understand that my participation is strictly voluntary. My decision regarding my participation will not affect my current or future relations with Mercer University or the Shepherd Center. If I decide to participate, I am free to refuse to answer any of the questions that may make me uncomfortable. I can withdraw at any time without my relations with the university, job, benefits, etc., being affected. I can contact Sir Allen Pegues at 770-882-5895 or Sirallen.D.Pegues@live.mercer.edu with any questions about this study.

I understand that this research study has been reviewed and Certified by the Institutional Review Board, Mercer University – Atlanta, GA campus. For research-related problems or questions regarding participants' rights, I can contact the Institutional Board at (Insert contact info).

I have read and understood the explanation provided to me. I have had all my questions answered to my satisfaction, and I voluntarily agree to participate in this study. I have been given a copy of this consent form. By signing this document, I consent to participate in the study.

Name of Participant (printed) _____

Signature: _____ Date: _____

Signature of Principal Investigator: _____ Date: _____

Information to identify and contact investigator 770-882-5895 or Sirallen.D.Pegues@live.mercer.edu.

If giving consent for a Minor Child to participate, print child's name:

Relationship to Child (please identify the relationship) Legal Guardian (appointed by)

Note: All informed consent statements should be designed to meet the needs of each research project and/or sample group and are therefore subject to change as needed.

Approval by parents does not sign away or negate the right of children to refuse to participate.

Each child's assent form must contain the above elements, state that participation is voluntary, and permit the child to refuse to participate.

APPENDIX C
SPIRITUAL WELL-BEING SCALE

© 1982 by Craig W. Ellison and Raymond F. Paloutzian; Scale used with written permission

For each of the following statements, please select the statement that best indicates the extent of your agreement or disagreement as it describes your personal experience.

Please tell me if you. . . .

Strongly Agree
Moderately Agree
Agree
Disagree
Moderately Disagree
Strongly Disagree

1-I don't find much satisfaction in private prayer with God. Do you. . .

- 1- Strongly Agree
- 2- Moderately Agree
- 3- Agree
- 4- Disagree
- 5- Moderately Disagree
- 6- Strongly Disagree

2-I don't know who I am, where I came from, or where I am going. Do you. . .

- 1- Strongly Agree
- 2- Moderately Agree
- 3- Agree
- 4- Disagree
- 5- Moderately Disagree
- 6- Strongly Disagree

3-I believe that God loves me and cares about me. Do you. . .

- 6- Strongly Agree
- 5- Moderately Agree
- 4- Agree
- 3- Disagree
- 2- Moderately Disagree
- 1- Strongly Disagree

4- I feel that life is a positive experience. Do you. . .

- 6- Strongly Agree
- 5- Moderately Agree
- 4- Agree
- 3- Disagree
- 2- Moderately Disagree
- 1- Strongly Disagree

5-I believe that God is impersonal and not interested in my daily situations.

Do you. . .

- 1- Strongly Agree
- 2- Moderately Agree
- 3- Agree
- 4- Disagree
- 5- Moderately Disagree
- 6- Strongly Disagree

6-I feel unsettled about my future. Do you. . .

- 1- Strongly Agree
- 2- Moderately Agree
- 3- Agree
- 4- Disagree
- 5- Moderately Disagree
- 6- Strongly Disagree

7-I have a personally meaningful relationship with God. Do you. . .

- 6- Strongly Agree
- 5- Moderately Agree
- 4- Agree
- 3- Disagree
- 2- Moderately Disagree
- 1- Strongly Disagree

8-I feel very fulfilled and satisfied with life. Do you. . .

- 6- Strongly Agree
- 5- Moderately Agree
- 4- Agree
- 3- Disagree
- 2- Moderately Disagree
- 1- Strongly Disagree

9-I don't get much personal strength and support from my God. Do you. . .

- 1- Strongly Agree
- 2- Moderately Agree
- 3- Agree
- 4- Disagree
- 5- Moderately Disagree
- 6- Strongly Disagree

10-I feel a sense of well-being about the direction my life is headed in. Do you...

- 6- Strongly Agree
- 5- Moderately Agree
- 4- Agree
- 3- Disagree
- 2- Moderately Disagree
- 1- Strongly Disagree

11-I believe that God is concerned about my problems. Do you. . .

- 6- Strongly Agree
- 5- Moderately Agree
- 4- Agree
- 3 - Disagree
- 2- Moderately Disagree
- 1- Strongly Disagree

12-I don't enjoy much about life. Do you. . .

- 1- Strongly Agree
- 2- Moderately Agree
- 3 - Agree
- 4- Disagree
- 5- Moderately Disagree

6- Strongly Disagree

13-I don't have a personally satisfying relationship with God. Do you. . .

- 1- Strongly Agree
- 2- Moderately Agree
- 3 - Agree
- 4 - Disagree
- 5- Moderately Disagree
- 6- Strongly Disagree

14-I feel good about my future. Do you. . .

- 6- Strongly Agree
- 5- Moderately Agree
- 4 - Agree
- 3- Disagree
- 2- Moderately Disagree
- 1- Strongly Disagree

15-My relationship with God helps me not to feel lonely. Do you. . .

- 6- Strongly Agree
- 5- Moderately Agree
- 4 - Agree
- 3- Disagree
- 2- Moderately Disagree
- 1- Strongly Disagree

16-I feel that life is full of conflict and unhappiness. Do you. . .

- 1- Strongly Agree
- 2* Moderately Agree
- 3 - Agree
- 4- Disagree
- 5- Moderately Disagree
- 6- Strongly Disagree

17-I feel most fulfilled when I'm in close communion with God. Do you. . .

- 6- Strongly Agree
- 5- Moderately Agree
- 4- Agree
- 3 - Disagree
- 2- Moderately Disagree
- 1- Strongly Disagree

18-Life doesn't have much meaning. Do you. . .

- 1- Strongly Agree
- 2- Moderately Agree
- 3 - Agree
- 4- Disagree
- 5- Moderately Disagree
- 6- Strongly Disagree

19-My relationship with God contributes to my sense of well-being. Do you. . .

- 6- Strongly Agree
- 5- Moderately Agree
- 4 - Agree
- 3- Disagree
- 2- Moderately Disagree
- 1- Strongly Disagree

20-I believe there is some real purpose for my life. Do you. . .

- 6- Strongly Agree
- 5- Moderately Agree
- 4 - Agree
- 3- Disagree
- 2- Moderately Disagree
- 1- Strongly Disagree

APPENDIX D
CONNOR-DAVIDSON RESILIENCE SCALE

For each of the following statements, please select that statement that best indicates the extent of your agreement as it describes your personal experiences within the last 30 days.

	1 Not true at all	2 Rarely true	3 Sometimes true	4 Often true	5 True nearly all the time			
1 Able to adapt to change				1	2	3	4	5
2 Close and secure relationships				1	2	3	4	5
3 Sometimes fate or God can help				1	2	3	4	5
4 Can deal with whatever comes				1	2	3	4	5
5 Past success gives confidence for new challenge				1	2	3	4	5
6 See the humorous side of things				1	2	3	4	5
7 Coping with stress strengthens				1	2	3	4	5
8 Tend to bounce back after illness or hardship				1	2	3	4	5
9 Things happen for a reason				1	2	3	4	5
10 Best effort no matter what				1	2	3	4	5
11 You can achieve your goals				1	2	3	4	5
12 When things look hopeless, I don't give up				1	2	3	4	5
13 Know where to turn for help				1	2	3	4	5
14 Under pressure, focus and think clearly				1	2	3	4	5
15 Prefer to take the lead in problem solving				1	2	3	4	5
16 Not easily discouraged by failure				1	2	3	4	5
17 Think of self as strong person				1	2	3	4	5
18 Make unpopular or difficult decisions				1	2	3	4	5
19 Can handle unpleasant feelings				1	2	3	4	5
20 Have to act on a hunch				1	2	3	4	5
21 Strong sense of purpose				1	2	3	4	5
22 In control of your life				1	2	3	4	5
23 I like challenges				1	2	3	4	5
24 You work to attain your goals				1	2	3	4	5
25 Pride in your achievements				1	2	3	4	5

APPENDIX E
DEMOGRAPHIC QUESTIONS

Instructions: Circle the answer that best apply to you. Only select one answer for each question.

Please indicate your gender.

- Male
- Female

Please indicate the category that includes your age.

- Under 18
- 18-24
- 25-34
- 35-44
- 45-54
- 55-64
- 65 or above

Ethnic Origin:

- African American/Black
- Asian/Pacific Islander
- Caucasian/White
- Hispanic/Latino
- Native American/American Indian
- Multiracial
- Other

What is the highest degree or level of education you have completed?

- Some high school, no diploma
- GED
- High school diploma
- Some college credit, no degree
- Associate degree
- Bachelor's Degree
- Master's Degree
- Doctorate degree

Indicate your classification of disability. (Indicate your level of injury in the blank next to your classification of disability.)

- Paraplegia
- Quadriplegia

What best describes your marital status?

- Single, not married
- Married
- Separated
- Divorced
- Widowed

What best describes your employment status?

- Employed full time
- Employed part-time
- Unemployed

Have you been employed in the same occupation for 6 months or longer post-injury?

- Yes
- No