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A STUDY OF THE RELATIONSHIP BETWEEN RESILIENCE AND JOB SATISFACTION IN DIRECT CARE WORKERS WHO WORK WITH TRAUMATIC BRAIN INJURED CLIENTS

by

MICHELE T. WHITE

DISSERTATION

Submitted to the Graduate School

of Wayne State University,

Detroit, Michigan

in partial fulfillment of the requirements

for the degree of

DOCTOR OF PHILOSOPHY

2014

MAJOR: COUNSELING

Approved by:

_________________________________________________________
Advisor

_________________________________________________________
Date
DEDICATION

This dissertation is dedicated to my wonderful family. It is truly by God's grace that I have been able to obtain a Ph.D.

I begin with my husband, of almost 21 years, Paul D. White. You have earned an honorary doctorate degree for the countless days and nights that you have prayed for me, prayed with me, cared for our children, picked up our children from school, cared for our home and provided for us in a way that I could never repay. I am eternally grateful that God has placed you in my life, for such a time as this. It is an honor to be your helpmate and wife.

To my daughter, Alexia, I am grateful that at the young age of 16 you have such wisdom, love and maturity, beyond measure. Thank you for your continuous daily support and pep talks. You are one of my biggest cheerleaders. Thank you for cheering loudly for Team Mommy.

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CHAPTER I
Introduction

According to the Centers for Disease Control and Injury Prevention (2003), every year, at least 1.7 million traumatic brain injuries (TBI) occur, either as an isolated injury or along with other injuries. TBI is a contributing factor to almost a third (30.5%) of all injury-related deaths in the United States.

To understand what happens when the brain is injured, it is important to realize what a healthy brain is made of and what it does. (Brain Injury Association of America, 2012) The brain is enclosed inside the skull. The skull acts as a protective covering for the soft brain. The brain is made of nerve cells, which are called neurons. The neurons form tracts that route throughout the brain. These nerve tracts carry messages to various parts of the brain. The brain uses these messages to perform functions. (Brain Injury Association of America, 2012)

The functions include coordinating our body’s systems. These systems are breathing, heart rate, body temperature, and metabolism; thought processing; body movements; personality; behavior; and the senses, such as vision, hearing, taste, smell, and touch. (Brain Injury Association of America, 2012) Each part of the brain serves a specific function and links with other parts of the brain to form more complex functions. Even "minor" or "mild" injuries to the brain can significantly disrupt the brain's ability to function. (Brain Injury Association of America, 2012)

When a brain injury occurs, the functions of the neurons, nerve tracts, or sections of the brain can be affected. If the neurons and nerve tracts are affected, they can have difficulty carrying the messages that tell the brain what to do. This can change the way a person thinks, acts, feels, and moves the body. Brain injury can also change the complex internal functions of
the body, such as regulating body temperature; blood pressure; bowel and bladder control. They may cause impairment or a complete inability to perform a function. (Brain Injury Association of America, 2012)

People who have a disability arising from a TBI are often confronted with distinctly different challenges than people with similar impairments arising from other causes. This is due, in part, to the nature of the injury itself. In order to work effectively with people with a TBI, it is essential to have a broad understanding of the physical processes of injury and recovery, the possible impact on brain functions, and the outcomes that may result for the individual, the family and society as a whole. (Brain Injury Rehabilitation Directorate, 2013)

A lack of knowledge and understanding of brain injury and the recovery process could contribute to job dissatisfaction, as well as other factors. Bowling (2007), shows that although satisfaction and performance are related to each other, satisfaction does not cause performance. Bowling (2007) states that a cause and effect relationship does not exist between job satisfaction and performance. Instead, the two are related because both satisfaction and performance are the result of employee personality characteristics, such as self-esteem, emotional stability, extroversion and conscientiousness.

Research has been conducted investigating the relationships between job satisfaction, burnout, and ethical behavior in mental health workers. In those studies, mental health workers included psychologists, social workers, psychiatrists, psychiatric nurses, licensed counselors, and casemanagers. (Acker, 1999; Dollard, Winefield, de Jonge, 2000; Prosser, et al., 1997; Skorupa & Agresti, 1993; Vredenburgh, Carlozzi, and Stein, 1999). The abundance of research did not include direct care workers, who are important assets in the mental health field. In fact, there was very limited clinical research as it pertained to direct care workers and job satisfaction and
burnout. There was a complete lack of research that pertained to direct care workers in the traumatic brain injury field.

Several factors have been documented in the literature as contributing to job dissatisfaction in all employees in the field of mental health. Prosser et al. (1997) reported that the greatest sources of job stress and dissatisfaction for those in the mental health field were an insufficient work force, responsibility without power, a disproportionate staff to administration ratio, multiple requests from co-workers and other agencies that are incompatible and large amounts of organizational change in a brief period. An additional stressor that was detailed by staff that was not covered in Prosser et al. (1997) survey related to job dissatisfaction included “being undervalued.” The term “undervalued” was represented as either low pay or low support by co-workers or management. The employees also commented that conflicts with other staff and management, as well as being under-resourced, were contributors to their job dissatisfaction (Prosser et al., 1997). As a continued result of job dissatisfaction, some workers in the mental health field develop the risk of burnout.

Burnout is described as a state of fatigue in which the worker continually attempts to meet goals and expectations with no success. (Freudenberger, 1975). Burnout has led to reports of feelings of emotional exhaustion, an unfeeling and impersonal response toward clients, and a reduced sense of personal accomplishments. A diminished sense of self-esteem, and a tendency to relate negatively to one’s work with clients, can accompany feelings of inadequacy (Vredenburgh, et al., 1999). Research by Vredenburgh, et al. (1999) also suggested that burnout among mental health workers was directly related to their health and indirectly related to the quality of care provided to their clients. How mental health care workers respond to this adversity can impact patient care, their likelihood of staying in their job, and their own mental
health. Due to the adversity, some get burned out, while others continue to thrive. This ability to thrive can be associated with resilience.

Resilience is the ability to successfully cope with change or misfortune (Wagnlid and Young, 1993). Resilient individuals regain their balance and keep going, despite adversity and misfortune. They find meaning amidst confusion and tumult. Resilient persons are self-confident and understand their own strengths and abilities. According to Wagnlid and Young (1993), resilient individuals have confidence in their ability to persevere because they have done so before and anticipate rather than fear change and challenges.

Resilient persons experience the same difficulties and stressors as everyone else; they are not immune or hardened to stress, but they have learned how to deal with life’s inevitable difficulties and this ability sets them apart (Wagnlid and Young, 1993).

This study seeks to examine job satisfaction factors and how they relate to the concept of resilience. Specifically, this study will examine whether or not there are connections between job satisfaction for direct care workers in the traumatic brain injury filed, who appear to exhibit resilient behaviors.
Statement of the Problem

In a 2011 report from the SCAN Foundation, it was stated that direct-care workers provide an estimated 70 to 80 percent of the paid hands-on long-term care and personal assistance received by Americans who are elderly or living with disabilities or other chronic conditions. These workers help their clients bathe, dress, and negotiate a host of other daily tasks. Direct care workers are a lifeline for those they serve, as well as for families and friends struggling to provide quality care.

Direct-care workers also constitute one of the largest and fastest-growing workforces in the country, playing a vital role in job creation and economic growth, particularly in low-income communities (SCAN Foundation, 2011).

The 2007 report from the Bureau of Labor Statistics reported that the employment estimate for the direct care workforce surpasses the 3 million mark and project demand calls for an additional 1 million new positions by 2016.

Hawes, Phillips, and Rose (2000) state that direct care turn over rates in the year 2000 alone, averaged 55 percent to 200 percent annually. Hawes, Phillips, & Rose (2000) further attribute the high turn over rates to job satisfaction and dissatisfaction. There is a unfortunate cycle that exist with turnover. When turnover numbers increase, temporarily there is a work overload that occurs, until the positions are filled.

Research was conducted to determine the factors that contribute to the disfunctioning cycle of job dissatisfaction and high job turnover with direct care workers in the traumatic brain injury field. The research regarding this population was non existent. The research did make global connections between job satisfaction and factors of resilience. However, the research failed to target a specific audience, thus producing findings that will aide employers in
developing programs to increase factors of resilience. Given the lack of research, this study seeks to determine correlates regarding job satisfaction for direct care workers in the traumatic brain injury filed, who appear to exhibit resilient behaviors.

**Purpose of the Study**

Fisher and Hanna (1931) noted that a considerable amount of employees’ job dissatisfaction could be associated with their degree of emotional maladjustment. This study seeks to determine correlates regarding job satisfaction for direct care workers in the traumatic brain injury filed, who appear to exhibit resilient behaviors.

Results of this study provide insight for the management and administrative levels of traumatic brain injury programs in order to increase the overall organizational effectiveness. The study most importantly benefits the traumatic brain injured clients who live within the programs, by creating training programs to increase resilience in direct care workers. The results of this study helps managers of direct care workers understand the needs of the direct care worker to better facilitate supervision, training, and educational supports.

For the purposes of this study, the population is defined as all direct care workers employed by two residential treatment facilities in southeast Michigan. Management at the two residential treatment facilities will ask for volunteers to participate in the research study. Management of the two facilities has granted permission to have 50 direct care workers participate in the study.

The findings of the research study will be presented to the management teams of both companies. The management teams have indicated that the information garnered in the study would assist the management team with designing effective training programs for direct care workers.
Research Questions

1. Is there a positive correlation between job satisfaction and resilience amongst direct care workers in the traumatic brain injury field?
2. Is resilience a significant predictor of job satisfaction?

Definition of Terms

Adversity:
This term refers to any difficulty or hardship that an individual encounters arising from the workplace which is the school.

Adversity Quotient:
This term refers to the total score obtained on the Adversity Quotient Profile developed by Dr. Paul Stoltz version 8.1 (2009) as a measure on how one handles adversity.

Job Satisfaction:
Job satisfaction refers to the direct care worker being satisfied with the current employment based on the desire to continue to work in that position. The employee has identified a set of positive reasons associated with maintaining the position. Overall, the job creates expressed happiness in the employee. The feelings a worker has about his or her job experiences in relation to previous experiences, or available alternatives as measured by the Job Descriptive Index. (Balzer, et al., 1997)

Resilience:
The ability to cope with adversity as measured by the four CORE scales of the Adversity Quotient (Control, Ownership, Reach, and Endurance) (Stoltz, 2000).

Adversity Quotient Profile:
The instrument used to measure an individual’s style of responding to adverse situations
Job Descriptive Index (JDI):
An assessment instrument used to determine the level of job satisfaction

Job in General Scale (JIG):
An assessment instrument used to determine overall job satisfaction

Direct Care Worker:
Direct care workers are people who care for individuals of all ages who have disabilities or a chronic illness and need their assistance. For the purpose of this study, direct care worker is defined as an employee, who works more than 25 hours per week, who cares for traumatic brain injured clients in a semi-independent living program.

Traumatic Brain Injury:
TBI is defined as an alteration in brain function, or other evidence of brain pathology, caused by an external force.

**Assumptions**

- Direct Care Workers selected to participate in this study were selected from facilities that provide care for traumatic brain injured clients.
- Direct Care Workers selected to participate in this study were employed for at least 90 days.
- Direct Care Workers selected to participate in this study responded to the request for data of their own free will without the expectation of reward or thought of repercussions and then answered the questions to the best of their ability.
- Direct Care workers answering or responding to items on Adversity Quotient Profile, Job Descriptive Index, and the Job in General Scale responded honestly, and the responses reflected an accurate indication of their attitudes and preferences on both instruments.
• Adversity Quotient Profile, Job in General Scale, and Job Descriptive Index were valid and reliable measures.

• As a descriptive study, the data and any conclusions about the data apply to the information collected from the participants and will not be projected to describe any other population.

**Limitations**

• This study was limited to direct care workers who only provide care for traumatic brain injured clients. Therefore, generalizations beyond the sample of the study are limited.

• This study relied on paper and pencil instruments, which are subject to socially desirable responses.

**Summary**

This chapter introduced the problem to be addressed. Extensive research was conducted to determine the factors that contribute to the disfunctioning cycle of job dissatisfaction and high job turnover with direct care workers in the traumatic brain injury field. The research was nonexistent. Both residential treatment facilities in southeast Michigan report high turnover rates amongst direct care workers. Research variables, research questions, and definition of terms were also described in Chapter 1. This study seeks to examine job satisfaction factors and how they relate to the concept of resilience. Specifically, this study will examine whether or not there are connections between job satisfaction for direct care workers in the traumatic brain injury filed, who appear to exhibit resilient behaviors.

Lastly, the basic assumptions and the limitations were presented. Chapter II presents the literature review and existing research regarding personality and job satisfaction
CHAPTER II

Review of the Literature

Introduction

An understanding of the factors that contribute to job satisfaction may aid employers to recruit and retain qualified direct care workers. This study sought to determine if relationships exist between the factors related to job satisfaction and resiliency among direct workers who provide care for traumatic brain injured clients.

This study was conducted to provide a theoretical framework pertaining to job satisfaction and resiliency of direct care workers, who provide care for traumatic brain injured clients. The first section of this study will provide an overview of the brain. The second section of this study will provide an overview of traumatic brain injury and the types of injuries associated with brain injury. The third section of this study will provide the assessment method used to determine the severity of injury. The fourth section of this study will provide an overview of direct care workers. The fifth section of this study will provide an overview of resilience. The sixth section of this study will provide an overview of the Adversity Quotient Profile. The last section of this study will provide an overview of the Job Descriptive Index and the Job in General Scale. A thorough review of the literature uncovered that resilience and job satisfaction with direct care workers, who provide care for traumatic brain injured clients, is nonexistent.
Overview of Brain Functioning

The brain is divided into main functional sections, called lobes. These sections or brain lobes are called the Frontal Lobe, Temporal Lobe, Parietal Lobe, Occipital Lobe, the Cerebellum, and the Brain Stem. Each has a specific function as described below from the Brain Injury Association of America (2012).

The frontal lobe is located at the front of the brain and is associated with reasoning, motor skills, higher level cognition, and expressive language. At the back of the frontal lobe, near the central sulcus, lies the motor cortex. This area of the brain receives information from various lobes of the brain and utilizes this information to carry out body movements. Damage to the frontal lobe can lead to changes in sexual habits, socialization, and attention as well as increased risk-taking.

The parietal lobe is located in the middle section of the brain and is associated with processing tactile sensory information such as pressure, touch, and pain. A portion of the brain known as the somatosensory cortex is located in this lobe and is essential to the processing of the body's senses. Damage to the parietal lobe can result in problems with verbal memory, an impaired ability to control eye gaze and problems with language.

The temporal lobe is located on the bottom section of the brain. This lobe is also the location of the primary auditory cortex, which is important for interpreting sounds and the language we hear. The hippocampus is also located in the temporal lobe, which is why this portion of the brain is also heavily associated with the formation of memories. Damage to the temporal lobe can lead to problems with memory, speech perception, and language skills.

The occipital lobe is located at the back portion of the brain and is associated with interpreting visual stimuli and information. The primary visual cortex, which receives and
interprets information from the retinas of the eyes, is located in the occipital lobe. Damage to this lobe can cause visual problems such as difficulty recognizing objects, an inability to identify colors, and trouble recognizing words.

The functional sections or lobes of the brain are also divided into right and left sides. The right side and the left side of the brain are responsible for different functions. General patterns of dysfunction can occur if an injury is on the right or left side of the brain (Brain Injury Association of America, 2012).

According to (Brain Injury Association of America, 2012), injuries of the left side of the brain can cause:

- Difficulties in understanding language (receptive language)
- Difficulties in speaking or verbal output (expressive language)
- Catastrophic reactions (depression, anxiety)
- Verbal memory deficits
- Impaired logic
- Sequencing difficulties
- Decreased control over right-sided body movements

According to (Brain Injury Association of America, 2012), injuries of the right side of the brain can cause:

- Visual-spatial impairment
- Visual memory deficits
- Left neglect (inattention to the left side of the body)
- Decreased awareness of deficits
- Altered creativity and music perception
• Loss of “the big picture” type of thinking
• Decreased control over left-sided body movements

According to (Brain Injury Association of America, 2012), diffuse brain injury (The injuries are scattered throughout both sides of the brain) can cause:

• Reduced thinking speed
• Confusion
• Reduced attention and concentration
• Fatigue
• Impaired cognitive (thinking) skills in all areas

Traumatic Brain Injury Overview

Traumatic brain injury is defined as an alteration in brain function, or other evidence of brain pathology, caused by an external force. (Brain Injury Association of America, 2012). Emergency personnel typically determine the severity of a brain injury by using an assessment called the Glasgow Coma Scale (GCS). The terms Mild Brain Injury, Moderate Brain Injury, and Severe Brain Injury are used to describe the level of initial injury in relation to the neurological severity caused to the brain. There may be no correlation between the initial Glasgow Coma Scale score and the initial level of brain injury and a person’s short or long term recovery, or functional abilities. The term “Mild” Brain injury is used to describe a level of neurological injury. Any injury to the brain is a real and serious medical condition.

The GCS is a reliable and objective way of recording the initial and subsequent level of consciousness in a person after a brain injury (Brain Injury Association of America, 2012). It is used by trained staff at the site of an injury like a car crash for example, and in the emergency department and intensive care units.
The Glasgow Coma Scale (GCS) provides a score in the range 3-15; patients with scores of 3-8 are usually said to be in a coma. The scale comprises three tests: eye, verbal and motor responses. The three values separately as well as their sum are considered. The lowest possible GCS (the sum) is 3 (deep coma or death), while the highest is 15 (fully awake person). A GCS score of 13-15 is considered a "mild" injury; a score of 9-12 is considered a moderate injury; and 8 or below is considered a severe brain injury (Brain Injury Association of America, 2012).

According to (Brain Injury Association of America, 2012), Mild Traumatic Brain Injury (GCS of 13-15) would have the following symptoms:

- Headache
- Fatigue
- Sleep disturbance
- Irritability
- Sensitivity to noise or light
- Balance problems
- Decreased concentration and attention span
- Decreased speed of thinking
- Memory problems
- Nausea
- Depression and anxiety
- Emotional mood swings

A moderate TBI (GCS of 8-12) occurs when there is a loss of consciousness that lasts from a few minutes to a few hours, when confusion lasts from days to weeks, or when physical, cognitive, and/or behavioral impairments last for months or are permanent. Persons with
moderate TBI generally can make a good recovery with treatment and successfully learn to compensate for their deficits (Defense and Veterans Head Injury Program & Brain Injury Association 1996).

According to (Brain Injury Association of America, 2012), severe brain injury (GCS below 8) occurs when a prolonged unconscious state or coma lasts days, weeks, or months. Severe brain injury is further categorized into subgroups with separate features:

- Coma
- Vegetative State
- Persistent Vegetative State
- Minimally Responsive State
- Akinetic Mutism
- Locked-in Syndrome

**Assessment of Traumatic Brain Injury**

According to (Rocchio, 1999), the neuropsychological assessment is a specialized task-oriented evaluation of human brain-behavior relationships. It relies upon the use of standardized testing methods to evaluate higher cognitive functioning as well as basic sensory-motor processes.

It is appropriate for both a neurologist and a neuropsychologist to perform evaluations and there are some similarities to the kind of testing they do; however, the neuropsychological assessment is designed to provide more detailed and comprehensive information about cognitive capabilities than the neurological evaluation (Rocchio, 1999).
A neuropsychologist is a psychologist with specialized training in brain-behavior relationships, and instead of being a medical doctor (MD), the academic credentials for a neuropsychologist will likely be PhD or PsyD. Rocchio (1999) states that the neuropsychologist will review the case history, hospital records and interview the individual and his/her family. The neuropsychologist acquires information about the person the individual was before the injury (i.e., school performance, habits, and lifestyle). If the evaluation is performed while the individual is in an active rehabilitation program it is used as a basis for formation of a treatment plan implemented by the therapists and others working in one-on-one or group settings with the individual.

Rocchio (1999) further states that the assessment is comprised of a wide range of psychological tests that objectively measure brain functions. Ideally, a board-certified neuropsychologist, not a technician, should do the assessment as interview and observation provides important information used in interpreting the results. Testing includes a variety of different methods for evaluating attention span, orientation, memory, concentration, language (receptive and expressive), new learning, mathematical reasoning, spatial perception, abstract and organizational thinking, problem solving, social judgment, motor abilities, sensory awareness and emotional characteristics and general psychological adjustment.

Brain Injury Association of America (2012) states that the most important outcome of this testing is the interpretation of the results which are used not only as the basis of the treatment plan for therapists, but even more importantly for the individual with brain injury and his/her family. Once the neuropsychologist has completed the scoring and the narrative portion of the assessment, a meeting is scheduled with the individual and his/her family to discuss the findings.
Based on the results of the neuropsychological examination, a rehabilitation plan is developed. The direct care workers assigned to work with the traumatic brain injury clients carry out the plan. There are unique challenges for direct care workers who work with people with a TBI. Staff work more effectively if they understand brain injury issues and the need for a client focus.

**Direct Care Workers**

In a 2011 report from the SCAN Foundation, it was stated that direct-care workers provide an estimated 70 to 80 percent of the paid hands-on long-term care and personal assistance received by Americans who are elderly or living with disabilities or other chronic conditions. These workers help their clients bathe, dress, and negotiate a host of other daily tasks. Direct care workers are a lifeline for those they serve, as well as for families and friends struggling to provide quality care.

Direct-care workers also constitute one of the largest and fastest-growing workforces in the country, playing a vital role in job creation and economic growth, particularly in low-income communities (SCAN Foundation, 2011).

Direct-care workers fall into three main categories tracked by the U.S. Bureau of Labor Statistics (BLS): Nursing Assistants (usually known as Certified Nursing Assistants or CNAs), Home Health Aides, and Personal Care Aides:

Nursing Assistants or Nursing Aides generally work in nursing homes, although some work in assisted living facilities, other community-based settings, or hospitals. They assist residents with activities of daily living (ADLs) such as eating, dressing, bathing, and toileting. They also perform clinical tasks such as range-of-motion exercises and blood pressure readings.
Given the cognitive complexities of brain injury, Nursing assistants assist with varied executive functioning tasks to help promote independence.

Home Health Aides provide essentially the same care and services as nursing assistants, but they assist people in their homes or in community settings under the supervision of a nurse or therapist. They may also perform light housekeeping tasks such as preparing food or changing linens. Home health aides also provide cognitive assistance with traumatic brain injured clients.

Personal Care Aides work in either private or group homes. They have many titles, including personal care attendant, home care worker, homemaker, and direct support professional (the latter work with people with intellectual and development disabilities). In addition to providing assistance with ADLs, these aides often help with housekeeping chores, meal preparation, and medication management. They also help individuals go to work and remain engaged in their communities.

At the end of 2007, the Bureau of Labor Statistics released the national occupational projections for the 2006-2016 period. Paraprofessional Healthcare Institute (PHI) analyzed the information. The demand for direct care workers over the next decade, particularly in home and community based settings, will continue to outpace supply dramatically (Personal Healthcare Institute, 2008).

The 2007 report from the Bureau of Labor Statistics reported that the employment estimate for the direct care workforce surpasses the 3 million mark and project demand calls for an additional 1 million new positions by 2016. At 4 million, the size of this workforce will exceed registered nurses (3.1 million), teachers from kindergarten through high school (3.8 million), cooks and food prep workers (3.3 million) fast food and counter workers (3.5 million), waiters and waitresses (2.6 million), and cashiers (3.4 million). Personal care aides and Home
health aides will be the second and third fast growing occupations in the country between 2006 and 2016, increasing 51 percent and 49 percent, respectively (Personal Healthcare Institute, 2008). The other professions listed above are expected to increase by only 18 percent. Unfortunately, this type of rapid growth brings additional considerations. Hawes, Phillips, & Rose (2000) state that direct care turn over rates in the year 2000 averaged 55 percent to 200 percent annually. Hawes, Phillips, & Rose (2000) further attribute the high turn over rates to job satisfaction and dissatisfaction. There is a unfortunate cycle that exist with turnover. When turnover numbers increase, temporarily there is a work overload that occurs, until the positions are filled. Research by Larson (2000) showed that when turnover decreased by 20 percent, resident and family satisfaction increased by 30 percent.

Direct care workers who work with the traumatic brain injured population face unique challenges. The person, who has suffered a traumatic brain injury experiences a loss of freedom that is accompanied by feeling of grief, isolation and depression. Direct care workers need a knowledge base of therapeutic techniques to assist clients navigate through these difficult emotions. Often times, additional difficulties arise when the client is unable to appropriately process these feelings and may become withdrawn or at the other end of the spectrum, even combative. Since the client who has suffered a traumatic brain injury may have a reduced cognitive ability, sometimes their physical abilities remain in tact, allowing for further frustration with the inability to control their bodies. The Direct care worker may feel not prepared or feel overwhelmed, when dealing with the cognitive demands of brain injury. Issues, such as these, may lead to increased staff turnover, thus leading to decreased job satisfaction. The question arises of how much does personality weigh into the equation of job satisfaction with this very
specific population. A thorough review of the literature concluded a lack of information describing this population.

**Resilience**

Resilience in today’s workplace is much different from the 1950s or 1960s. The emphasis is more on the workers employability than it is on the job security that used to be present when an employee was loyal to an organization. Resilience in the twenty-first century focuses on the employee’s preparedness for the anticipated ongoing changes that occur in the fast-paced economy.

Based on experience in career counseling Rickwood (2002) identified a resilience framework to address self-understanding. Enhancing intrinsic motivation by acting on dreams and goals rather than conforming to a job that does not maximize the individuals’ skills is the foundation for building resilience. Individuals must find a sense of well-roundedness, balancing employment with leisure activities. Building relationships with others develops a sense of connectedness and purpose. Individuals must avoid discouragement during employment difficulties, focusing on the strengths and the future plan.

Siebert (n.d.) believes resilience comes from internal resources that are developed. Siebert describes ability to work within change, relationships, self-esteem, valuable work experience, and being open to opportunity gives definition to resilience. Adaptability is a factor that continually drives the resilient worker (Siebert, n.d.). A marriage exists between resilience and job satisfaction. A satisfied worker will remain resilient in nature. The satisfaction develops within the individuals’ self-determined factors of defined satisfaction.
With the majority of resilience theories being specific to particular populations (e.g., adolescents, families, police officers), there is an understandable call for a generic theory that can be applied across different groups of people and potentially stressful situations (see, e.g., Richardson, 2002). One such theory, which is commonly cited in the resilience literature is the metatheory of resilience and resiliency (Richardson, 2002; Richardson, Neiger, Jensen, & Kumpfer, 1990). This particular theory can potentially be applied to different types of stressors, adversities and life events, and at various levels of analysis (such as individual, familial, and community).

Richardson (2002) suggested that the history of resilience research can be categorized into three subareas, called “waves.” The first wave of research was a pursuit by scholars to identify the qualities (i.e., protective factors) of individuals who react positively to difficult conditions in their lives. The second wave of research examined resilience in the context of coping with stressors, adversity, change, or opportunity. The third wave of research explored the identification of motivational forces within individuals and groups that drive them toward self-actualization in their lives.

**Adversity Quotient Profile**

Adversity Quotient (AQ) is the science of human resilience (Stoltz, 2000). According to Stoltz (2000), Adversity Quotient measures one’s ability to prevail in the face of adversity. It explains how one responds to adverse situations, and how one rises above adversity. Stoltz (2000) said that life is like mountain climbing and that people are born with a core human drive to ascend. Ascending means moving toward one’s purpose no matter what are the goals. AQ is the underlying factor that determines one’s ability to ascend.
Stoltz (2000) further indicated that “people who successfully apply AQ perform optimally in the face of adversity – the challenges, big and small, that confront us each day. In fact, they not only learn from these challenges, but they also respond to them better and faster. For businesses and other organizations, a high Adversity Quotient workforce translates to increased capacity, productivity, and innovation as well as lower attrition and higher morale.”

Stotlz (1997) further indicates that one’s Adversity Quotient, the ability to prevail in the face of adversity, is comprised of four interrelated constructs CORE. These CORE include perceived control over the adversity; perceived ownership of the outcome of the adversity (regardless of its cause); perceived range or scope of the adversity (i.e.,) how far the adversity “bleeds” into other areas of one’s life); and finally perceived endurance of the adversity (i.e., how long the adversity lasts).

**Job Descriptive Index and Job in General Scale**

Krumboltz (1979) stated that employees who were more satisfied with their work environments made fewer errors, had fewer accidents and job injuries, were absent less often, and were more productive. Factors related to job satisfactions include level of education, pay and salary levels, supervision and management styles, interaction with co-workers, and opportunity for advancement.

The Job Descriptive Index (JDI) was developed by Smith, Kendall, and Hulin and publicized in their book, *The Measurement of Satisfaction in Work and Retirement: A Strategy for the Measurement of Attitudes*. Job Descriptive Index is a scale used to measure five major factors associated with job satisfaction: the nature of the work itself, compensations and benefits, attitudes towards supervisors, relations with co-workers, and opportunities for promotion. Each
facet contains either 9 or 18 items. These facets can give employers a hint at which aspects of the job need improvement and which are in good shape. The 5 facets are also good at predicting outcomes such as turnover and intentions to quit.

Hanisch (1992) stated that the JDI is comprised of adjectives that a participant chooses to describe aspects of his/her job by marking a yes, no or ? for each. JDI does not ask participants to respond directly to questions concerning their feelings about their jobs. The scales are interpreted as measuring the degree of job satisfaction (Hanisch, 1992).

The Job In General scale is also designed to measure employees’ satisfaction with their jobs. The JIG is a measure of global satisfaction, meaning that participants are asked to think about how satisfied they are with their job in a broad, overall sense.

Summary

Chapter II focused on the literature relevant to this study. This study was conducted to provide a theoretical framework pertaining to job satisfaction and personality type of direct care workers, who provide care for traumatic brain injured clients. An overview of the brain, traumatic brain injury and the types of injuries, assessment method used to determine the severity of injury, overview of direct care, overview of resilience, overview of the Adversity Quotient Profile, overview of the Job Descriptive Index and Job in General Scale were explored.

Chapter III describes the study, reliability and validity, research setting, preliminary procedures, participants, selection method, and instruments that will be used in this study.
CHAPTER III

Methodology

A descriptive research design and non-experimental design were used to investigate resilience and job satisfaction among direct care workers who provide care for traumatic brain injured clients.

Descriptive research is concerned with hypothesis formulation and testing, the analysis of the relationships between non-manipulated variables and the development of generalizations (Borg & Gall, 1989).

Design of the Study

This study assessed the relationship between resilience of direct care workers and job satisfaction. The study utilized results from three questionnaires and the results from a direct care worker information survey, developed by the researcher. Direct care worker responses from all four instruments were compared and analyzed.

Research Questions

1. Is there a positive correlation between job satisfaction and resilience amongst direct care workers in the traumatic brain injury field?
2. Is resilience a significant predictor of job satisfaction?

Research Hypothesis

1. The null hypothesis for research question 1 is: There is no significant correlation between Adversity Quotient Profile and the Job in General Score.
2. The null hypothesis for research question 2 is: Resilience is not a significant predictor of job satisfaction.
Selection of the Direct Care Workers

The entire group of people in a category is called a population. The smaller group selected for testing is called a sample. The sample is then used to make generalizations about the population from which it is drawn (Walsh & Savickas, 2005).

For the purposes of this study, the population was defined as all direct care workers employed by two residential treatment facilities in southeast Michigan. Management at the two residential treatment facilities asked for volunteers to participate in the research study. Management of the two facilities granted permission to have 50 direct care workers participate in the study.

Those chosen met the definition of direct care worker created in Chapter I of this study. Direct care workers are people who care for individuals of all ages who have disabilities or a chronic illness and need their assistance. For the purpose of this study, direct care worker is a defined as an employee, who works more than 25 hours per week, who cares for traumatic brain injured clients in a semi-independent living program.

Description of the Instruments

Four instruments were used to obtain data: Adversity Quotient Profile, the Job Descriptive Index, the Job in General Scale, and a direct care worker information survey developed by the researcher.
Adversity Quotient Profile

Adversity Quotient Profile (AQP) is a self-rating questionnaire designed to measure an individual’s style of responding to adverse situations (Stoltz, 1997). AQP describes fourteen scenarios, only ten of which are actually scored. Each scenario is followed by four questions, each answered on a 5-point scale, e.g. 1 representing complete control to 5 representing no control. Each of the four answers is scored on a different scale. There are four dimensions of ten questions each: Control, Ownership, Reach and Endurance. Scores on each scale of the AQP can range from 10 to 50. The four individual dimensions scores (Control, Ownership, Reach and Endurance) are characterized as low, moderate, and high. The overall Total Adversity Quotient score can be characterized as low, below average, average, above average, and high (Stoltz, 2000).

The Control dimension assesses the degree of control people perceive that they have over adverse situations when they occur. The higher the person scores on this dimension, the more likely the person will be able to experience a greater perceived control which can lead to more flexibility in situations and better problem solving. The lower the person scores on this dimension, the more likely the person will perceive that circumstances are beyond his/her control, which can lead to feelings of helplessness. A score of 41-50 would be high, a score of 33-40 would be moderate and a score from 10-32 would be low. (Stoltz, 2000)

The Ownership dimension describes the extent to which people can improve their situations and take responsibility for those improvements as necessary. People who score high on this dimension normally accept responsibility for improving their situations even if it was caused by influences beyond their control. They evaluate and learn from the situations and own the
results of their actions. Those scoring low on this dimension are less likely to hold themselves accountable for the situations they are in and the consequences that stem from the situations. As a result, such people will probably have lower motivation and self-esteem. A score of 43-50 would be high, a score of 37-42 would be moderate and a score from 10-36 would be low (Stolotz, 2000).

The Reach dimension “describes the degree to which you perceive good or bad events reaching into other areas of your life” (Stoltz, 2000). If a person scores high on this dimension he/she is more likely to put life events into perspective and keep them from interfering in his/her life, therefore not allowing themselves to develop a feeling of being overwhelmed. In contrast, those who score low on this dimension may develop a feeling of being paralyzed. This paralysis might not allow them to change their situation for the better. A score of 42-50 would be high, a score of 32-41 would be moderate and a score from 10-31 would be low (Stoltz, 2000).

The Endurance dimension describes people’s perceptions of the lasting affects of events and their consequences on their lives. If individuals score high on this dimension, they “may tend to view a given difficulty as temporary, fleeting and unlikely to happen again. This enhances your energy, optimism, and likelihood to take action” (Stoltz, 2000, p. 4). Those scoring low on this dimension react in the exact opposite manner. A score of 37-50 would be high, a score of 29-36 would be moderate and a score from 10-28 would be low (Stoltz, 2000).

The sum of the four scores is the person’s Adversity Quotient (AQ) (PEAK Learning, 2002). A low AQ would be in the range from 40-117, a moderately low AQ would be in the range of 118-134, a moderate AQ would be in the range of 135-160, a moderately high AQ would be in the range from 161-177 and a high AQ would be in the range of 178-200 (Stoltz, 2000).
Reliability and Validity of the Adversity Quotient Profile

Reliability is how consistently a test measures what it attempts to measure (Walsh & Savickas, 2005). For the AQP, reliability may refer to internal consistency, that is, the consistency of answers to all questions within a scale, or it may refer to the consistency of answers at two different points in time when no change in AQ has occurred during that time interval. The first of these meanings—internal consistency—is most appropriate for estimating the reliability of the AQP because life experiences may cause a person's AQ to rise or fall over time (Grandy, 2009).

Reliability coefficients may range from 0 to 1, 1 being the highest and strongest score that can be achieved. Specifically, a reliability of 0 means that answers to questions are entirely unrelated to one another, often because they measure different traits. A reliability of 1 would mean that all answers are perfectly intercorrelated (a condition that would happen if all questions were identical or nearly identical). Realistically, a test is regarded as having "very good" reliability if its reliability coefficient is greater than roughly 0.8. A sub score reliability greater than about 0.7 may be regarded as “very good” (Grandy 2009).

According to Grandy (2009), the AQ score and all four subscores were found to have high reliabilities, based on Cronbach’s coefficient alpha score. They are as follows:

AQ - .91

Control - .82

Ownership - .83
Reach - .84

Endurance - .80

**Job Descriptive Index**

The Job Descriptive Index (JDI) and the Job in General Scale (JIG) were the instruments selected to measure job satisfaction. The JDI and the JIG were developed as part of a nationwide survey of retirement satisfaction. Both the JDI and JIG have been refined over the years and subjected to an intensive validation program. (Hulin, 1961).

The five scales that are a part of the JDI are satisfaction with work, pay, promotion opportunities, co-workers, and supervision. The JDI is composed of adjectives that the direct care worker chooses to describe aspects of his/her job by marking a “yes”, a “?” , or a “no” for each.

**Job in General Scale**

Along with the original five scales on the JDI, Balzer, et al. (1997) added a Job-in-General scale, a direct measure of overall job satisfaction (see Appendix A). The format of the JIG scale is identical to that of the other scales on the JDI. The authors caution that summing across JDI facets does not result in an accurate measure of overall job satisfaction, thus the need for an overall evaluation of employee satisfaction (Balzer, et al., 1997). The JDI and JIG scales together provide a measure of job satisfaction that includes satisfaction with the principal areas of a job as well as overall job satisfaction. Separate and combined psychometric properties exist for the JDI and the JIG.
Reliability and Validity of the Job Descriptive Index and Job in General Scale

According to Balzer (1997), there are many job satisfaction assessment tools available to the researcher to measure job satisfaction; however few have the reliability and validity of the Abridged Job Descriptive Index (JDI). The JDI was originally introduced in 1969 and has been tested in over 1600 research projects and continues to be revised and validated to increase the effectiveness of the assessment (Balzer, 1997).

Leong and Vaux (1992) reported that the five JDI scales show excellent internal consistency and stability and that the dimensional structure of the measure is “stable, robust, and congruent over a wide range of occupational types and levels.” Regarding internal consistency, Balzer, et al. (1997) reported alpha coefficients for the JDI scale between .86 and .91, specifically, Work (.90), Pay (.86), Promotions (.87), Supervision (.91), and Co-workers (.91), and .92 for the JIG.

Also, the facets of job satisfaction measured by the previous versions of the JDI appear to be moderately independent and have substantial convergent and discriminant validity (mean $r = .41$, range $=.32-.53$) (Leong and Vaux, 1992). Convergent validity in regard to the JIG is also demonstrated by correlations with other global measures such as The Brayfield Rothe, an index of job satisfaction (1951). Correlations with this instrument ranged from .66 to .80 (Balzer, et al., 1997). The Job in General scale will be used as a measure of overall job satisfaction in this study.
Direct Care Worker Information Survey

The researcher will develop an information survey for direct care workers to complete. The survey will contain the following components:

- Age
- Gender
- Level of Education
- Length of time employed with facility
- Pay Range

Data Collection

The Direct care workers were notified via inter-office mail. An invitation to participate in this study and the purpose was explained, in the letter. Originally, several small group meetings were scheduled at the main office of the two residential traumatic brain injury facilities. However, due to scheduling difficulties, different data collection methods were employed. As stated above, invitations were sent to direct care workers in the two facilities asking them to participate. A total of 50 invitations were sent to the direct care workers. The management of both facilities notified the researcher that all 50 participants had agreed to take the survey.

Each direct care worker was given a research information sheet approved by the Institutional Review Board at a large urban university. The research information sheet contained a detailed description of the purpose of the study, the study procedures, the benefits, the risk, costs, compensation, confidentiality, and voluntary participation/withdrawal parameters. All staff were reminded that their participation was completely voluntary and there was no compensation offered for the completion of the four instruments. The research information sheet further explained how the results would remain confidential and that the results will be used to increase
resilience and create training programs for direct care workers. After completion of the four instruments, the direct care workers were encouraged to place the contents in a large manila envelope (provided by the researcher) and seal said envelope.

Sample Size

There are three factors that affect sample size in a study: Alpha level, effect size, and power (Laerd Statistics, 2013). Alpha level refers to the probability of making a Type I error. This refers to rejecting the null hypothesis when the null hypothesis is true. The researcher chose to use the alpha level as \( \alpha = .05 \), a standard level in social sciences research (Laerd Statistics, 2013). This alpha level translated into the acceptance of the risk that 5% of the time or less, the researcher may falsely identify a relationship between the variables. Effect size pertains to the quantitative value that is used to estimate the direction and magnitude of an effect of a treatment, a difference between two treatment groups, or any other numerical comparison or contrast (Keppel & G, 2004). There are different ways to calculate effect size. Due to the statistical analysis chosen for this study, Cohen’s d was used for effect size. Cohen’s d defines small effect size as \( d = .2 \), medium effect size as \( d = .5 \), and large effect size as \( d = .8 \). The researcher chose to use a large effect size of \( d = .7 \). The power refers to the probability that the test will accurately reject the null hypothesis when the null hypothesis is false. As the power increases, the probability of rejecting the null hypothesis when the null hypothesis is false increases. Therefore, the researcher chose the power level as .95 (large power for behavioral research).

The researcher used GPOWER 3.1.9 software to determine the ideal sample size for this study. Table 1 and Table 2 show both the input and output for the GPOWER 3.1.9 software.
Table 1

**GPOWER input for determining sample size**

<table>
<thead>
<tr>
<th>Input</th>
<th>Tails</th>
<th>Effect Size</th>
<th>Alpha (α)</th>
<th>Power</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>.7</td>
<td>.05</td>
<td>.95</td>
</tr>
</tbody>
</table>

Table 2

**GPOWER output for determining sample size**

<table>
<thead>
<tr>
<th>Output</th>
<th>Critical t</th>
<th>Df</th>
<th>Total sample size</th>
<th>Actual Power</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2.144</td>
<td>14</td>
<td>16</td>
<td>.9535</td>
</tr>
</tbody>
</table>

Based on the output above, the sample size needed to run the Pearson correlation at the suggested intervals is 16. As referenced in the data collection section, 50 participants agreed to participate in the research. However, there were several client emergencies at one facility that prohibited the collection of many of the research packets. Therefore, the sample size is 17. This number is sufficient to run the correlation outlined in the next section.

**Method of Analysis**

The variables in this research study were continuous variables. Many statistical analyses can be undertaken to examine the relationship between two continuous variables within a group of subjects. (Laerd Statistics, 2013) Two of the main purposes of such analyses are:

- To assess whether the two variables are associated. There is no distinction between the two variables and no causation is implied, simply association.
- To enable the value of one variable to be predicted from any known value of the other variable. One variable is regarded as a response to the other predictor (explanatory)
variable and the value of the predictor variable is used to predict what the response would be.

For the purposes of this study, the Pearson product moment correlation coefficient was used. The Pearson product-moment correlation coefficient (Pearson correlation coefficient) is a measure of the strength of a linear association between two variables and is denoted by $r$. Pearson product-moment correlation attempts to draw a line of best fit through the data of two variables, and the Pearson correlation coefficient, $r$, indicates how far away all these data points are to this line of best fit. (Laerd Statistics, 2013).

**Research Questions**

1. Is there a positive correlation between job satisfaction and resilience amongst direct care workers in the traumatic brain injury field?
2. Is resilience a significant predictor of job satisfaction?

**Research Hypothesis**

The null hypothesis for research question 1 is: There is no significant correlation between Adversity Quotient Profile and the Job in General Score.

The null hypothesis for research question 2 is: Resilience is not a significant predictor of job satisfaction.
Variables

The data were analyzed using the Statistical Program for Social Studies (SPSS). The variables for the instruments were recorded as follows:

Balzer (1997) states that the variables on the JDI include the following related to the work itself:

- Fascinating
- Routine
- Satisfying
- Boring
- Good
- Gives sense of accomplishment
- Respected
- Uncomfortable
- Pleasant
- Useful
- Challenging
- Simple
- Repetitive
- Creative
- Dull
- Uninteresting
- Can see results
- Uses my abilities
Balzer (1997) states that variables on the JDI for pay include the following:

- Income adequate for normal expenses
- Fair
- Barely live on income
- Bad
- Income provides for luxuries
- Less than I deserve
- Well paid
- Insecure
- Underpaid

Balzer (1997) states that the variables on the JDI for opportunities for promotion include the following:

- Good opportunities for promotion
- Opportunities somewhat limited
- Promotion on ability
- Dead end job
- Good chance for promotion
- Unfair promotion policy
- Infrequent promotions
- Regular promotions
- Fairly good chance for promotion
Balzer (1997) states that the variables on the JDI for supervision include the following:

- Asks my advice
- Hard to please
- Impolite
- Praises good work
- Tactful
- Influential
- Up to date
- Doesn’t supervise enough
- Has favorites
- Tell me where I stand
- Annoying
- Stubborn
- Knows job well
- Bad
- Intelligent
- Poor planner
- Around when needed
- Lazy

Belzer (1997) states that the variables on the JDI for co-workers include the following:

- Stimulating
- Boring
Belzer (1997) states that the variables on the JDI for the job in general include the following:

- Pleasant
- Bad
- Ideal
- Waste of time
- Good
• Undesirable
• Worthwhile
• Worse than most
• Acceptable
• Superior
• Better than most
• Disagreeable
• Makes me content
• Inadequate
• Excellent
• Rotten
• Enjoyable
• Poor

The variables on the researcher developed direct care worker information survey included the following:

• Age- in years
• Gender- Male or Female
• Level of education- High school graduate, CNA, Associates degree, or Bachelors degree or higher
• Length of time employed - less than one year, 1-2 years, 3-5 years, more than 5 years
• Pay range – less than $12.00 per hour, $12.50 per hour to $15.00 per hour, over $15.00 per hour.
Summary

Chapter III described the type of research design, design of the study, research questions, selection of direct care workers, design of the instruments, reliability and validity, data collection and the method of analysis. Chapter IV will present the results of the statistical analyses and description of the findings from the data collected for this study.
Chapter IV

Results

This study was designed to assess the relationship between resilience of direct care workers and job satisfaction. This chapter will describe the results of the data collected via demographic questionnaire, Adversity Quotient Profile (AQP), the Job Descriptive Index, and the Job In General (JIG) scale. In addition to these results, the descriptive and frequency statistics will be provided regarding the demographics of the participants. Pearson correlation and simple regression were used for the analysis of the data. An alpha level of .5 was used for all of the analyses conducted.

For the purposes of this research study, the variable total AQ refers to the cumulative score of the participant on the adversity quotient profile. The variable total JIG refers to the cumulative score of the participant on the overall job satisfaction profile.

Research question one: Is there a positive correlation between job satisfaction and resilience amongst direct care workers in the traumatic brain injury field?

Research question two: Is resilience a significant predictor of job satisfaction?

Descriptive Statistics

Gender

Frequency statistics for the gender of the participants show that 23.5% were male and 76.5% were female. Below, table 3 shows the frequency distribution of the gender of the participants.
Table 3

*Frequency Distributions for Gender*

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>4</td>
<td>23.5</td>
<td>23.5</td>
<td>23.5</td>
</tr>
<tr>
<td>Female</td>
<td>13</td>
<td>76.5</td>
<td>76.5</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>17</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Age

Table 4 shows the frequency statistics of the participant’s ages.

Table 4

*Frequency Distributions for Age*

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-30</td>
<td>5</td>
<td>29.4</td>
<td>29.4</td>
<td>29.4</td>
</tr>
<tr>
<td>31-44</td>
<td>5</td>
<td>29.4</td>
<td>29.4</td>
<td>58.8</td>
</tr>
<tr>
<td>45-60</td>
<td>6</td>
<td>35.3</td>
<td>35.3</td>
<td>94.1</td>
</tr>
<tr>
<td>Over 60</td>
<td>1</td>
<td>5.9</td>
<td>5.9</td>
<td>100.00</td>
</tr>
<tr>
<td>Total</td>
<td>17</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Education

Frequency statistics for education showed that 35.3% of the participants reported finishing high school. Those holding a CNA certification were 5.9% of the participants. Those holding an Associates degree were 29.4% of the participants. Those possessing a bachelor’s degree or higher were 29.4% of the participants. Table 5 shows the distribution of education for the participants in this study.
Table 5

*Frequency Distributions for Education*

<table>
<thead>
<tr>
<th>Education Level</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>High School</td>
<td>6</td>
<td>35.3</td>
<td>35.3</td>
<td>35.3</td>
</tr>
<tr>
<td>CNA</td>
<td>1</td>
<td>5.9</td>
<td>5.9</td>
<td>41.2</td>
</tr>
<tr>
<td>Associates Degree</td>
<td>5</td>
<td>29.4</td>
<td>29.4</td>
<td>70.6</td>
</tr>
<tr>
<td>Bachelors or higher</td>
<td>5</td>
<td>29.4</td>
<td>29.4</td>
<td>100.00</td>
</tr>
<tr>
<td>Total</td>
<td>17</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

**Employment**

Frequency statistics for employment showed that 23.5% of the participants reported being employed less than one year. Out of the 17 participants, 7.6% reported being employed between one and two years. In addition, 29.4% of the participants reported being employed between three and five years. Lastly, 29.4% of the participants reported being employed more than five years. Table 6 shows the frequency of the employment distribution for the participants.
Table 6

*Frequency Distributions for length of employment*

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 1 year</td>
<td>4</td>
<td>23.5</td>
<td>23.5</td>
</tr>
<tr>
<td>1-2 years</td>
<td>3</td>
<td>17.6</td>
<td>17.6</td>
</tr>
<tr>
<td>3-5 years</td>
<td>5</td>
<td>29.4</td>
<td>29.4</td>
</tr>
<tr>
<td>More than 5 years</td>
<td>5</td>
<td>29.4</td>
<td>29.4</td>
</tr>
<tr>
<td>Total</td>
<td>17</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

**Salary range**

Frequency statistics for salary showed that 41.2% of the participants reported earning less than $12 per hour. Out of the 17 participants, 11.8% reported earning between $12.01 and $15 per hour. In addition, 41.2% of the participants reported earnings over $15 per hour. One participant did not disclose the information. Therefore, it is reported on table 7 as a missing number. Table 7 shows the frequency of the salary ranges.

Table 7

*Frequency Distributions for salary*

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than $12.00</td>
<td>7</td>
<td>41.2</td>
<td>43.8</td>
</tr>
<tr>
<td>$12.01 to $15.00</td>
<td>2</td>
<td>11.8</td>
<td>12.5</td>
</tr>
<tr>
<td>over $15.00</td>
<td>7</td>
<td>41.2</td>
<td>43.8</td>
</tr>
<tr>
<td>Total</td>
<td>16</td>
<td>94.1</td>
<td>100.0</td>
</tr>
<tr>
<td>Missing</td>
<td>1</td>
<td>5.9</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>17</td>
<td>100.00</td>
<td></td>
</tr>
</tbody>
</table>
Testing of the Assumptions

Pearson’s correlation is the statistical analysis that was used in this research. Pearson’s correlation has four assumptions that need to be met in order to run said correlation (Laerd Statistics, 2013). The first assumption is that the two variables measured are continuous. In this research study both variables are continuous.

The second assumption is that there needs to be a linear relationship between the two variables. For the purposes of this study a scatterplot was created in order to test the linear relationship of the two variables. Although small, there was a linear relationship found between the two variables. \( R^2 = .052 \). This means that 5% of all the variance in overall job satisfaction can be predicted by resilience.

The third assumption is that there should be no significant outliers. In this research study, there were no significant outliers.

The last assumption is that there needs to be bivariate normality. The researcher discovered, after completing the data screening, that the Total JIG scores were skewed negatively. Therefore the Total JIG variable was transformed by squaring the scores. The total JIG variable was renamed to total JIG_squared and was within acceptable limits after transformation. Table 8 depicts the test for normality.
Table 8

**Test for normality**

<table>
<thead>
<tr>
<th></th>
<th>Kolmogorov-Smirnov</th>
<th>Shapiro-Wilk</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Statistic  df  Sig.</td>
<td>Statistic  df  Sig.</td>
</tr>
<tr>
<td>Total AQ score</td>
<td>.178   17  .159</td>
<td>.957   17  .568</td>
</tr>
<tr>
<td>Total JIG_squared</td>
<td>.179   17  .152</td>
<td>.900   17  .067</td>
</tr>
</tbody>
</table>

a. Lillifors Significance Correlation

If the assumption of normality has been violated, the significance value will be less than .05 on the Shapiro-Wilk test. If the assumption of normality has not been violated, the significance value will be greater than .05. This is because the Shapiro-Wilk test is testing the null hypothesis that the data’s distribution is equal to a normal distribution. For both the total AQ score and the total JIG_squared variable, the significance is greater than .05. Therefore the assumption of normality has been met. Both variables were normally distributed, as assessed by Shapiro-Wilk test (p >.05). Figures 1 and 2 show the plots of the expected and observed distribution for the data.
Figure 1

*Expected and Observed value for total AQ scores*
Figure 2

*Expected and observed value for total JIG\_squared scores*
Hypothesis 1

The null hypothesis for research question 1 is: There is no significant correlation between Adversity Quotient Profile scores and the Job in General Scores. The alternative hypothesis for research question 1 is: There is a significant correlation between Adversity Quotient Profile scores and the Job in General Scores.

Hypothesis 1 was tested using a Pearson correlation. The results indicated that there was no significant correlation between total AQ scores and the total JIG_squared scores. A Pearson's product moment correlation was run to assess the relationship between overall job satisfaction and resilience. Preliminary analyses showed the relationship to be linear with both variables normally distributed, as assessed by Shapiro-Wilk tests (p > .05), and there were no outliers. There was a small negative correlation between overall job satisfaction and resilience, r(15) = -.219. However, the p value (significance level) of .399 indicates that the correlation is not statistically significant and occurred by chance. Therefore, we fail to reject the null hypothesis.

Table 9 shows the correlation matrix.
Table 9

*Pearson R correlation*

<table>
<thead>
<tr>
<th></th>
<th>Total AQ Score</th>
<th>Total JIG_squared</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total AQ score</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>1</td>
<td>-.219</td>
</tr>
<tr>
<td>Sig.(2-tailed)</td>
<td></td>
<td>.399</td>
</tr>
<tr>
<td>N</td>
<td>17</td>
<td></td>
</tr>
<tr>
<td><strong>Total JIG_squared</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>-.219</td>
<td>1</td>
</tr>
<tr>
<td>Sig.(2-tailed)</td>
<td></td>
<td>.399</td>
</tr>
<tr>
<td>N</td>
<td>17</td>
<td></td>
</tr>
</tbody>
</table>
Table 10 shows descriptive data for the four core dimensions (control, ownership, reach and endurance) of the adversity quotient profile and the total adversity quotient.

Table 10

Means and standard deviations for the adversity response profile scores

<table>
<thead>
<tr>
<th>Variables</th>
<th>n</th>
<th>Min.</th>
<th>Max.</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total on Control Dimension</td>
<td>26</td>
<td>26</td>
<td>50</td>
<td>39.7</td>
<td>6.240</td>
</tr>
<tr>
<td>Total on Ownership Dimension</td>
<td>26</td>
<td>26</td>
<td>50</td>
<td>42.64</td>
<td>5.869</td>
</tr>
<tr>
<td>Total on Reach Dimension</td>
<td>10</td>
<td>10</td>
<td>40</td>
<td>27.50</td>
<td>7.912</td>
</tr>
<tr>
<td>Total on Endurance Dimension</td>
<td>14</td>
<td>14</td>
<td>43</td>
<td>31.71</td>
<td>8.242</td>
</tr>
<tr>
<td>Total AQ score</td>
<td>119</td>
<td>119</td>
<td>165</td>
<td>140.93</td>
<td>13.060</td>
</tr>
</tbody>
</table>

The Control dimension assesses the degree of control people perceive that they have over adverse situations when they occur. A score of 41-50 would be high, a score of 33-40 would be moderate and a score from 10- 32 would be low. (Stoltz, 2000). The mean on the control dimension for the research study falls in the moderate range for the direct care workers surveyed.

The Ownership dimension describes the extent to which people can improve their situations and take responsibility for those improvements as necessary. A score of 43-50 would be high, a score of 37-42 would be moderate and a score from 10-36 would be low (Stoltz, 2000). The mean on the ownership dimension for the research study falls in the moderate/high range for the direct care workers surveyed.
The Reach dimension “describes the degree to which you perceive good or bad events reaching into other areas of your life” (Stoltz, 2000). A score of 42-50 would be high, a score of 32-41 would be moderate and a score from 10-31 would be low (Stoltz, 2000). The mean on the reach dimension for the research study falls in the low range for the direct care workers surveyed.

The Endurance dimension describes people’s perceptions of the lasting effects of events and their consequences on their lives. A score of 37-50 would be high, a score of 29-36 would be moderate and a score from 10-28 would be low (Stoltz, 2000). The mean on the endurance dimension for the research study falls in the moderate range for the direct care workers surveyed.

The sum of the four scores is the person’s Adversity Quotient (AQ) (PEAK Learning, 2002). A low AQ would be in the range from 40-117, a moderately low AQ would be in the range of 118-134, a moderate AQ would be in the range of 135-160, a moderately high AQ would be in the range from 161-177 and a high AQ would be in the range of 178-200 (Stoltz, 2000). The mean on the AQ profile for the research study falls in the moderate range for the direct care workers surveyed.

Table 11 shows the descriptive data for the subscales of the job descriptive index and the total job in general scale. It should be noted that the total job in general scores reported are the non-transformed scores, so that the scores can be readily interpreted.
Table 11

*Means and standard deviations for the job descriptive index and the job in general scale*

<table>
<thead>
<tr>
<th>Variables</th>
<th>n</th>
<th>Min.</th>
<th>Max.</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total on work scale</td>
<td>6</td>
<td>54</td>
<td>39.00</td>
<td>31.13</td>
<td>6.240</td>
</tr>
<tr>
<td>Total on pay scale</td>
<td>0</td>
<td>54</td>
<td>20.53</td>
<td>7.912</td>
<td>5.869</td>
</tr>
<tr>
<td>Total on promotion scale</td>
<td>28</td>
<td>54</td>
<td>42.47</td>
<td>8.242</td>
<td>7.912</td>
</tr>
<tr>
<td>Total on supervisor scale</td>
<td>11</td>
<td>54</td>
<td>43.00</td>
<td>11.47</td>
<td>8.242</td>
</tr>
<tr>
<td>Total on coworkers scale</td>
<td>39</td>
<td>54</td>
<td>46.53</td>
<td>5.34</td>
<td>5.34</td>
</tr>
</tbody>
</table>

All of the scales noted above, range in score from 0 to 54. A score above 27 indicates satisfaction on the scale. A score below 27 indicates dissatisfaction on the scale (Balzar, 1997). The mean score on almost every scale noted above indicates satisfaction.
Hypothesis 2

The null hypothesis for research question 2 is: Resilience is not a significant predictor of job satisfaction. The alternative hypothesis for research question 2 is: Resilience is a significant predictor of job satisfaction.

The null hypothesis for research question 2 was tested using a simple linear regression with the new variable JIG\_squared as the criterion variable and AQ score as the predictor variable. However, prior to performing the simple linear regression, assumptions needed to be tested.

The first assumption was that there was a linear relationship between the two variables. This assumption was met in the first hypothesis.

The second assumption was that there were no significant outliers or influential points. Again, this assumption was met in the first hypothesis. The third assumption was that there was an independence of errors(residuals). Table 11 shows the Durbin–Watson statistic. The Durbin–Watson statistic should range from 0 to 4. Ideally, a value between 1.5 and 2.5 would indicate that there is no correlation between residuals (Laerd Statistics, 2013). The Durbin–Watson statistic for this research study is 1.171. Therefore, we can accept that there is independence of errors (residuals).
Table 12

*Model Summary*

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std Error</th>
<th>Durbin-Watson</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.219</td>
<td>.048</td>
<td>-.016</td>
<td>494.071</td>
<td>1.171</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), total AQ score  
b. Dependent Variable: TotalJIG_Squared  

The third assumption deals with heteroscedasticity. Heteroscedasticity deals with the variance of errors being constant across the observations. If this assumption is met, the values will be evenly spread across the scatterplot. Based on the scatter plot shown in figure 3, this assumption has been met.

The fourth assumption deals with checking for normality of residuals (error) Figure 4 shows a histogram that depicts the standardized residuals appearing to be normally distributed. Therefore, this assumption has been met.

Lastly, if the residuals are normally distributed, a normal P-P plot of regression standardized residuals would reflect all points being aligned along the diagonal. Figure 5 depicts such distribution.
Figure 3

Scatterplot of the dependent variable TotalJIG_squared
Figure 4

*Histogram of the Dependent variable*

![Histogram](image)

- **Dependent Variable:** TotalJIG_squared
- **Mean:** \(-3.47\times10^{-17}\)
- **Std. Dev.:** 0.968
- **N:** 17
Figure 5

Normal P-P Plot of Regression Standardized Residual

Dependent Variable: TotalJIG_squared
In the model summary table, R is the absolute value of the Pearson correlation between the dependent variable and the independent variable (Laerd Statistics, 2013). It indicates the strength of the association between the two variables. In this research study, $R = .219$, which indicates a moderate correlation. The $R^2$ value represents the proportion of variance in the dependent variable that can be explained by our independent variable. In this research study, $R^2 = .048$. This means that the independent variable explains 4.8% of the variability of the dependent variable.

Table 12 shows an ANOVA table for the regression model results. The ANOVA table assists in determining if the regression model results are a statistically significant better prediction of the dependent variable (Laerd Statistics, 2013).

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Regression</td>
<td>183629.068</td>
<td>1</td>
<td>183629.068</td>
<td>.752</td>
<td>.399</td>
</tr>
<tr>
<td>Residual</td>
<td>3661595.403</td>
<td>15</td>
<td>244106.360</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>3845224.471</td>
<td>16</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: TotalJIG_squared
b. Predictors: (Constant), total AQ score

In this research study, the regression model is not statistically significant, $F(1,15) = .752$, $p<.005$. Therefore, the research failed to reject the null hypothesis.
Summary

Chapter IV presented the results of the study. The descriptive statistics regarding the demographics of the participants such as age, gender, highest level of education, length of employment, and salary range were provided. The results of the assumptions tests for both hypothesis one and hypothesis two were provided. Finally, results of the two hypotheses were presented. Chapter V will provide the discussions and limitations about the results of the study as well as suggestions for further research.
CHAPTER V

Summary and Discussion

Purpose of the Study

The purpose of this study was to assess the relationship between resiliency and job satisfaction in direct care workers, who work with traumatic brain injured clients.

Direct-care workers constitute one of the largest and fastest-growing workforces in the country, playing a vital role in job creation and economic growth, particularly in low-income communities (SCAN Foundation, 2011).

The 2007 report from the Bureau of Labor Statistics reported that the employment estimate for the direct care workforce surpasses the 3 million mark and project demand calls for an additional 1 million new positions by 2016.

Hawes, Phillips, and Rose (2000) state that direct care turnover rates in the year 2000 alone, averaged 55 percent to 200 percent annually. Hawes, Phillips, and Rose (2000) further attribute the high turnover rates to job satisfaction and dissatisfaction. There is an unfortunate cycle that exist with turnover. When turnover numbers increase, temporarily there is a work overload that occurs, until the positions are filled. Could the identification of resilience factors decrease the rate of turnover amongst direct care workers?

Research was conducted to determine the factors that contribute to the disfunctioning cycle of job dissatisfaction and high job turnover with direct care workers in the traumatic brain injury field. Unfortunately, the research regarding this population was non-existent. The research did make global connections between job satisfaction and factors of resilience. However, the research failed to target a specific audience, thus producing findings that will aid employers in developing programs to increase factors of resilience. Given the lack of research,
this study sought to determine correlates regarding job satisfaction for direct care workers in the traumatic brain injury field, who appear to exhibit resilient behaviors. In each of the hypotheses tested, the evidence did not support a statistically significant correlation between the variables.

**Restatement of the Methodology**

A descriptive research design was used to investigate resilience and job satisfaction among direct care workers who provide care for traumatic brain injured clients.

This study assessed the relationship between resilience of direct care workers and job satisfaction. The study utilized results from three questionnaires and the results from a direct care worker information survey, developed by the researcher. Direct care worker responses from four instruments were compared and analyzed. The four instruments were: Adversity Quotient Profile, the Job Descriptive Index, the Job in General Scale, and a direct care worker information survey developed by the researcher.

**Research Questions**

Is there a positive correlation between job satisfaction and resilience amongst direct care workers in the traumatic brain injury field?

Is resilience a significant predictor of job satisfaction?

**Selection of the Direct Care Workers**

The entire group of people in a category is called a population. The smaller group selected for testing is called a sample. The sample is then used to make generalizations about the population from which it is drawn (Walsh & Savickas, 2005).

For the purposes of this study, the population was defined as all direct care workers employed by two residential treatment facilities in southeast Michigan. Management at the two
residential treatment facilities asked for volunteers to participate in the research study. Management of the two facilities granted permission to have 50 direct care workers participate in the study. However, there were several emergencies at one facility that prohibited the collection of many of the research packets. Therefore, the sample size was 17. This number was sufficient to run the correlation based on the results of the GPOWER 3.1.9 software.

**Results and Findings**

The participants in this research study were all direct care workers employed by a residential treatment facility in a Midwest state. Each participant completed four research instruments that were later used to compile the data used for the Pearson correlation and the simple regression model.

Frequency statistics for the gender of the participants show that 23.5% were male and 76.5% were female. The frequency distribution for age showed that the majority of the participants were between the age of 45 and 60.

Frequency statistics for education showed that 35.3% of the participants reported finishing high school. Those holding a CNA certification were 5.9% of the participants. Those holding an Associates degree were 29.4% of the participants. Those possessing a bachelor’s degree or higher were 29.4% of the participants.

Frequency statistics for employment showed that 23.5% of the participants reported being employed less than one year. Out of the 17 participants, 7.6% reported being employed between one and two years. In addition, 29.4% of the participants reported being employed between three and five years. Lastly, 29.4% of the participants reported being employed more than five years.
Frequency statistics for salary showed that 41.2% of the participants reported earning less than $12 per hour. Out of the 17 participants, 11.8% reported earning between $12.01 and $15 per hour. In addition, 41.2% of the participants reported earnings over $15 per hour. One participant did not disclose the information.

**Hypothesis 1**

The null hypothesis for research question 1 is: There is no significant correlation between Adversity Quotient Profile and the Job in General Score. Said hypothesis was tested using a Pearson correlation. The results indicated that there was no significant correlation between total AQ scores and the total JIG_squared scores. A Pearson's product moment correlation was run to assess the relationship between overall job satisfaction and resilience. Preliminary analyses showed the relationship to be linear with both variables normally distributed, as assessed by Shapiro Wilk tests (p > .05), and there were no outliers. There was a small negative correlation between overall job satisfaction and resilience, \( r(15) = .219 \). However, the p value (significance level) of .399 indicates that the correlation is not statistically significant and occurred by chance. Therefore, we fail to reject the null hypothesis.

Additional analyses were run on each of the four AQ dimensions and the total JIG_squared variable. All Pearson correlations showed no statistically significant correlation between each dimension and overall job satisfaction.

Further, additional analyses were run on each of the job descriptive inventory scale variables. All Pearson correlations showed no statistically significant correlation between the job descriptive inventory scale variables and overall job satisfaction.
In reviewing the adversity response profile scores, the four core dimensions showed higher than expected results. The control dimension assesses the degree of control people perceive that they have over adverse situations when they occur. The mean on the control dimension for this research study fell in the moderate range for the direct care workers surveyed. The ownership dimension describes the extent to which people can improve situations and take responsibility for those improvements as necessary. The mean on the ownership dimension for the research study fell in the moderate to high range for direct care workers surveyed. This may suggest that direct care workers feel empowered at their place of employment. The reach dimension describes the degree to which you perceive good or bad events reaching into other areas of your life. The mean on the reach dimension for this research study fell in the low range for the direct care workers surveyed. The scorers on the reach dimension may have implications for further research, which will be discussed later. The endurance dimension describes people's perceptions of the lasting effects of events and their consequences on their lives. The mean on the endurance dimension for the research study fell in the moderate range for the direct care workers surveyed. The mean on the AQ profile, as a total, fell in the moderate range for the direct care workers surveyed.

In reviewing the job descriptive index and the job in general scale results, it appeared that the mean score for almost every scale indicated satisfaction with certain aspects of the job. According to Balzar (1997), a score above 27 indicates satisfaction with that particular area of the job. A score below 27 indicates dissatisfaction with that particular area of the job.

The mean score on the work scale was 39, indicating overall satisfaction for direct care workers on this scale. The mean for pay scale was 31.13, indicating overall satisfaction for direct
care workers on this scale. The mean on the promotion scale was 20.53, indicating dissatisfaction for direct care workers on this scale. In reviewing the raw data between the two companies researched, the promotion issue was rated either very low or moderately high. The mean on the supervisor's scale was 42.47, indicating overall satisfaction for direct care workers on this scale. It should be noted that this is a high mean indicating that there may be a valued relationship direct care workers and their supervisors. It is important to note that the supervisors were not present at the time the research questionnaires were distributed or completed. Therefore, it removes the question of supervisor bias. The mean score on the coworker scale was 43.00, indicating overall satisfaction for direct care workers on this scale. This mean was the highest scored mean for any subscale. Based on these results, direct care workers enjoy the people that they work with in the workplace. There may be future implications for other research studies based on these results.

In reviewing the raw data, there appeared to be certain trends that would have suggested causality. For example, 8.5% (n=2), of the direct care workers who report earning under $12.00 an hour, scored high on the resilience scale. However after adding multiple scores into the database, the variance of means decreased the likelihood of finding significance.

**Hypothesis 2**

The null hypothesis for research question 2 is: Resilience is not a significant predictor of job satisfaction. The null hypothesis for research question 2 was tested using a simple linear regression with the new variable JIG_squared as the criterion variable and AQ score as the predictor variable. All assumptions were met, prior to performing the linear regression. In this
research study, the regression model was not statistically significant, F(1, 15) = .752, p < .005. Therefore, the research failed to reject the null hypothesis.

After finding no significant correlation in any of the variables and job satisfaction in hypothesis 1, it appeared that hypothesis 2 would not be supported as well. The simple linear regression only confirmed the researcher’s assumption prior to running said analysis.

Limitations

This study was limited to direct care workers who only provide care for traumatic brain injured clients. Therefore, generalizations beyond the sample of the study are limited. In addition, the small sample size for this study limited the generalization of the sample past the two traumatic brain injury companies. The small sample size also affected the power of this study and resulted in a relatively small power, which means the probability that the test has accurately accepted or rejected the null hypothesis was low.

As with most social sciences research, the instruments are developed around an individual theoretical perspective relative to definite constructs. The instruments had definitive scales and dimensions that purported to measure either resilience or job satisfaction, on several facets. As self-report instruments, these instruments may have imposed limitations on the findings due to common problems such as response bias, accuracy of recall, interpretation of scenarios and descriptors (Babbie, 1995). The wording of the questions in the instrument is designed to allow for a more broad interpretation of the individual, also being a possible limitation of the study.
This study relied on paper and pencil instruments, which are subject to socially desirable responses. Also some of the responses of direct care workers were hard to read. In one case, the entry was illegible and that data had to be entered as a missing variable.

**Recommendations for Future Research**

The Reach dimension on the AQ profile described the degree to which one perceives good or bad events reaching into other areas of one’s life. The mean on the Reach dimension for this research study fell in the low range for the direct care workers surveyed. Based on the data from this research study it is difficult to ascertain whether this reach dimension refers to personal aspects of a direct care worker's life or the work aspects of a direct care worker’s life. It would be advantageous for future research to tease out personal resilience from work resilience. Work life and home life balance has been an important topic in American society for decades. However, there appears to be different attributes that individuals employ at work and home that may shed light on the correlation between job resilience and job satisfaction.

It was noted earlier that the mean score on the coworker and supervisor scale of the job descriptive index was high. Future research would be beneficial to determine whether positive/healthy work relationships as a variable contribute to job satisfaction, thus increasing resilience.

This research study was a quantitative study. It may be advantageous for future research to use a qualitative methodology research design employing the use of open-ended questions to examine the relationship between job satisfaction and resilience of direct care workers. A rationale for using a qualitative methodology would be to explore factors that influence resilience directly from workers who have been identified as resilient and satisfied with their job.
Conclusion

Direct care worker turnover has affected many organizations across the United States. As stated several times within this research study, the direct care worker population is growing at a rapid rate. Therefore, it is imperative to find factors that contribute to job satisfaction to decrease the turnover rate. Unfortunately, the literature shows there is not active research focused on direct care worker turnover and retention. However, there appears to be new training programs being developed by select companies that address retention.

This study provided valuable information, but was not free from limitations. The main limitation of this study was the small number of participants. Future studies should be expanded to larger groups with multiple traumatic brain injury residential facilities. Based on the limitations stated in the study, the two research questions posed in this study have not been sufficiently answered. Therefore, it remains possible that a correlation could exist between resilience and job satisfaction, given a larger population.
January 16, 2014

To the IRB review committee:

Michele White, Doctoral Candidate at Wayne State University, has permission to administer surveys to our direct care staff for the sole purpose of research. Participation of the staff will be voluntary. It is our understanding that the research is to study the relationship between resilience and job satisfaction for direct care workers in the traumatic brain injury field.

Sincerely,

Mark Shatz, PhD
Owner of Testpointe Residential Living Centers
THERASUPPORT, LLC
Brain Injury Rehabilitation

Thomas S. Rosenbaum, Ph.D.
2725 Packard Rd, Suite 101
Ann Arbor, MI 48108
Telephone: (734) 677-0200
Fax: (734) 677-3310

January 20, 2014

To Whom It May Concern:

This correspondence will serve as notice and affirmation that TheraSupport, L.L.C. has agreed to assist Michele White in pursuit of her academic endeavors and has approved its staff participation in the completion of a “job satisfaction” survey. It is understood that while TheraSupport, L.L.C. endorses and has given approval to this participation, it acknowledges and supports the decision of individual staff to complete or exempt themselves from this survey.

[Signature]

Thomas M. Lopez, M.S.
Director of Operations and Program Development
TheraSupport, L.L.C.
CONCURRENCE OF EXEMPTION

To: Michele White  
Theoretical & Behavior Foundations

From: Dr. Deborah Ellis  
Campbell - [Redacted]

Date: February 07, 2014

RE: IRB #: 015314B3X

Protocol Title: A Study of the Relationship between Resilience and Job Satisfaction in Direct Care Workers Who Work with Traumatic Brain Injured Clients

Sponsor: 
Protocol #: 1401012733

The above-referenced protocol has been reviewed and found to qualify for Exemption according to paragraph #2 of the Department of Health and Human Services Code of Federal Regulations [45 CFR 46.101(b)].

- Revised Social/Behavioral/Education Exempt Protocol Summary Form (received in the IRB Office 2/7/14)
- Dissertation (received in the IRB Office 1/21/2014)
- Research Information Sheet (dated 1/15/2014)
- Data Collection Tools: Demographic Sheet, The Job Descriptive Index, and Adversity Quotient Profile

This proposal has not been evaluated for scientific merit, except to weigh the risk to the human subjects in relation to the potential benefits.

* Exempt protocols do not require annual review by the IRB.
* All changes or amendments to the above-referenced protocol require review and approval by the IRB BEFORE implementation.
* Adverse Reactions/Unexpected Events (AR/UE) must be submitted on the appropriate form within the timeframe specified in the IRB Administration Office Policy (http://irb.wayne.edu/policies-human-research.php).

NOTE: Forms should be downloaded from the IRB Administration Office website http://irb.wayne.edu at each use.
APPENDIX B: INSTRUMENTS

Demographic Sheet For
A STUDY OF THE RELATIONSHIP BETWEEN RESILIENCE AND JOB SATISFACTION IN DIRECT CARE WORKERS WHO WORK WITH TRAUMATIC BRAIN INJURED CLIENTS

Please answer the following questions:

• What is your age? Check the box that applies
  □ under 18
  □ 18 to 30
  □ 31 to 44
  □ 45 to 60
  □ over 60

• What is your gender? Check the box that applies
  □ Male
  □ Female

• What is the highest level of education that you have completed? Check the box that applies
  □ High School
  □ CNA
  □ Associates Degree
  □ Bachelors Degree or higher

• How long have you been employed with your current employer? Check the box that applies
  □ Less than one year
  □ 1-2 years
  □ 3-5 years
  □ more than 5 years

• This question is optional. What is your current rate of pay? Check the box that applies
  □ Less than $12.00 per hour
  □ $12.01 to $15.00 per hour
  □ over $15.00 per hour
<table>
<thead>
<tr>
<th>Work on Present Job</th>
<th>Pay</th>
<th>Opportunities for Promotion</th>
<th>Supervision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Think of the work you do at present. How well does each of the following words or phrases describe your work? In the blank beside each word or phrase below, write.</td>
<td>Think of the pay you get now. How well does each of the following words or phrases describe your present pay? In the blank beside each word or phrase below, write.</td>
<td>Think of the opportunities for promotion that you have now. How well does each of the following words or phrases describe these? In the blank beside each word or phrase below, write.</td>
<td>Think of the kind of supervision that you get on your job. How well does each of the following words or phrases describe this? In the blank beside each word or phrase below, write.</td>
</tr>
<tr>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>?</td>
<td>?</td>
<td>?</td>
<td>?</td>
</tr>
</tbody>
</table>

Y for "Yes" if it describes your work
N for "No" if it does not describe it
? for "?" if you cannot decide

Fascinating
Routine
Satisfying
Boring
Good
Gives sense of accomplishment
Respected
Exciting
Rewarding
Useful
Challenging
Simple
Repetitive
Creative
Dull
Uninteresting
Can see results
Uses my abilities

Income adequate for normal expenses
Fair
Barely live on income
Bad
Comfortable
Less than I deserve
Well paid
Enough to live on
Underpaid

Good opportunities for promotion
Opportunities somewhat limited
Promotion on ability
Dead-end job
Good chance for promotion
Very limited
Infrequent promotions
Regular promotions
Fairly good chance for promotion

Supportive
Hard to please
Impolite
Praises good work
Tactful
Influential
Up-to-date
Unkind
Has favorites
Tells me where I stand
Annoying
Stubborn
Knows job well
Bad
Intelligent
Poor planner
Around when needed
Lazy
Adversity Response Profile (ARP)

For more information please contact

Paul G. Stoltz, Ph.D. PEAK Learning, Inc. 2650 Skyview Trail
San Luis Obispo, CA 93405

Phone number (805)595-7775 or http://www.peaklearning.com/peak/contactus/main.htm
REFERENCES


Nicodemus, K.M., Personality Type and Job Satisfaction. Chapter 2. Clinical Neuropsychologist, 4011 Springfield Lane, Greenville, DE 19807, USA


Stoltz, P.G. (2000). *Adversity quotient @ work: Make everyday challenges the key to your success—Putting the principles of AQ into action.* New York: Morrow.


ABSTRACT

A STUDY OF THE RELATIONSHIP BETWEEN RESILIENCE AND JOB SATISFACTION IN DIRECT CARE WORKERS WHO WORK WITH TRAUMATIC BRAIN INJURED CLIENTS

by

MICHELE T. WHITE

May 2014

Advisor: Dr. Joann Holbert

Major: Counseling

Degree: Doctor of Philosophy

The direct care worker occupation is a very fast and growing workforce. In fact, by the year 2016, it is estimated that it might be the largest workforce in the country. With the rapid growth come difficulties. One of those difficulties is a high turn over rate. Research shows that people that are resilient stay longer at a job versus those who are not resilient. Is there a relationship between resilience and job satisfaction? This research sought to determine if a relationship existed. The research delved into a particular field, traumatic brain injury. This research study attempted to determine if a relationship existed between resilience and job satisfaction amongst direct care workers who work with traumatic brain injury clients. The goal of the study was to uncover valuable information about any given relationship found that would aide in decreasing the high turn over in the field. Statistical analysis determined that there was no relationship between job satisfaction and resilience. However, small sample size and other limitations may be have contributed to the outcome. Therefore, further research should be conducted with a larger sample size, more agencies and with a multi-state approach.
Michele White graduated from Adrian College with a Bachelor's degree in Sociology/Human Services in 1990. She started her career in the traumatic brain injury (TBI) field in 1991, as a claims adjuster and then later a case manager.

Michele went back to school to obtain a Masters degree in clinical psychology from the University of Detroit Mercy, in 1996. At the conclusion of her degree, she applied for licensure with the state of Michigan and currently holds a license as a limited licensed psychologist.

During her TBI career, she has served in a wide range of roles; Case Manager, Claims Adjuster, Therapist, Clinical Director, Director of Operations. Michele is the owner and Director of Behavioral Operations for White Behavioral Consultants, P.C. White Behavioral Consultants, P.C.is a premier provider of behavioral modification services for clients with traumatic brain injuries. She has travelled the country as a speaker for PESI Healthcare Company, speaking on various mental health topics. She serves as Vice President of the School Board for Washtenaw Christian Academy, and also plays a role on the Academic Relations Committee. Michele resides in southeast Michigan with her husband of 20 years and five children.