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THE RELATIONSHIP BETWEEN FAMILY FUNCTIONING,  
FAMILY RESILIENCE, AND QUALITY OF LIFE AMONG  
VOCATIONAL REHABILITATION CLIENTS

by

Kristi P. Openshaw

A dissertation submitted in partial fulfillment  
of the requirements for the degree

of

Doctorate of Philosophy

in

Disability Disciplines

(Rehabilitation Counseling)

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Logan, Utah

2011

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## ABSTRACT

The Relationship Between Family Functioning, Family Resilience, and Quality  
of Life Among Vocational Rehabilitation Clients

by

Kristi P. Openshaw, Doctor of Philosophy

Utah State University, 2011

Major Professor: Dr. Jared C. Schultz  
Department: Special Education and Rehabilitation

While there has been extensive research on the quality of life for people with disabilities, very little research has been conducted on the way in which families impact the quality of life of these individuals. This study focused on how family dynamics impact the quality of life for people with disabilities who are clients of state vocational rehabilitation agencies. Specifically, family flexibility and cohesion, as well as family resilience, were the independent variables; quality of life was the dependent variable.

It was found that family functioning and family resilience play an important role in the quality of life for people with disabilities. There was a strong relationship between family functioning and quality of life, in addition to family resilience and quality of life. Ten life domains were used to examine quality of life: physical health, mental health, work/education, leisure activities, relationship with significant other, family relationships, social relationships, financial situation, independence/autonomy, and religious/spiritual expression. For each domain, the participant was asked four questions on the importance,

control, satisfaction, and impact of disability. Family functioning and family resilience significantly correlated with all of the 10 life domains on most of the four factors. Family dynamics account for 36% of the variance of quality of life. Family dynamics significantly impact the quality of life for people with disabilities and therefore should be taken into consideration in the rehabilitation process.

(116 pages)

## PUBLIC ABSRACT

### The Relationship Between Family Functioning, Family Resilience, and Quality of Life Among Vocational Rehabilitation Clients

by

Kristi Openshaw

The Special Education and Rehabilitation Department at the University of Utah in conjunction with state Vocational Agencies from Utah, Idaho, and Oklahoma proposes to examine the effect of family on the overall quality of life for individuals with a disability who are clients of a state vocation rehabilitation agency. Specifically, the way a family communicates, how close the family members are, family organization patterns, and the resilience within the family were the variables used.

The researchers propose a one-time assessment given to 1000 participants. The total cost is around \$1500.00. The cost includes postage and materials. The participants will be randomly selected from three state vocational rehabilitation agencies. Three assessments and a demographic sheet will be sent to each participant. The assessments include the Family Adaptability and Cohesion Scale (FACES-II), the Family Resilience Assessment Scale (FRAS), and the Domain Specific Clinical Centrality Scale (DSC-C). The FACES-II will assess family relationships and family organization, the FRAS will assess family resilience, and the DSC-C will assess quality of life.

The potential benefits include understanding the relationship between family and quality of life in order to better serve people with disabilities in the vocational rehabilitation system. The rehabilitation process could be improved by including family.

## ACKNOWLEDGMENTS

I would like to thank my major professor, Dr. Jared Schultz, for believing in me and working with me throughout the years. I would also like to thank Dr. Michael Millington for guiding me and collaborating with me on multiple projects, and Dr. Julie Smart for all that she has taught me. I am a better rehabilitation counselor and person because of these three people. I would also like to thank the other committee members, Dr. Robert Morgan and Dr. Gary Straquadine, for their assistance and support.

Finally, special thanks to my mother, father, mother-in-law, and father-in-law for guiding me and supporting me throughout this process. Most importantly of all, I wish to thank my husband for his unconditional love, patience, and support and my two sons who have been with me every step of the way. I could not have achieved this without you all.

Kristi Openshaw

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# CHAPTER 1

## INTRODUCTION

Brown, Schalock, and Brown (2009) stated that people across and within cultures value similar aspects of life; nevertheless, cultural beliefs, practices, and access to basic human needs influence an individual's life satisfaction. Disability is often viewed as culturally defined and, as such, adjusting to life with a disability can be influenced by cultural factors such as language, beliefs, family roles, gender roles, and family dynamics (Smart, 2009; Smart & Smart, 1991). In addition to culture and value systems, quality of life is shaped by one's worldview and daily life experiences (Meares, 1997). The study of quality of life following disability is important in rehabilitation counseling (Bishop, Berven, Hermann, & Chang, 2002; Frain, Berven, Chan, & Tschopp, 2008). A simplistic definition of quality of life is satisfaction within multiple life areas (Bishop et al, 2002). Frain and colleagues (2008) further defined quality of life as the "individuals' perceptions of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards, and concerns" (p. 17). Quality of life extends beyond adjustment to a disability; it incorporates individual differences and both the positive and negative experiences associated with experiencing a disability (Bishop, 2005a).

Quality of life may be impacted by family functioning, such as the way the family communicates and how close the family members are (Brown et al, 2009). Family functioning is defined as the way in which the family members interact, react to, and treat other family members; it includes variables within the family such as communication styles, traditions, clear roles and boundaries, and the degree of fusion, flexibility,

adaptation, and resilience (Winek, 2010). When a family experiences stress, an adverse event, a traumatic event, or a life change (positive or negative), the family enters a period of adjustment. During this adjustment period, the family system as a whole must adapt and change the way in which it functions (Olson & Gorall, 2003).

The family is a critical component in the rehabilitation counseling process of the person with a disability. It can impact multiple areas including rehabilitation outcomes (Sander et al, 2002), medication use (Berglund, Vahlne, & Edman, 2003), the therapeutic working alliance (Sherer et al, 2007), vocational outcomes (Kaplan, 1990; Lindstrom, Doren, Metheny, Johnson, & Zane, 2007), and coping (Power & Hershenson, 2003). Some argue that the family is an essential variable in a successful rehabilitation outcome (Power, Hershenson, & Fabian, 1991; Versluys, 1980). Although the family has been viewed as an important factor in the rehabilitation process (Sander et al, 2002), there is limited research in the relationship of the family and the quality of life of individuals with disabilities.

### **Statement of the Problem**

Due to its multidimensional and holistic nature, quality of life is becoming more important in the field of rehabilitation counseling (Tschopp, Frain, & Bishop, 2009). Quality of life has been researched extensively, including such topics as healthcare and education/special education (Schalock, 2004), coping skills (Schwartz, 1999), employment self-efficacy (Tsaousides et al, 2009), physical activity (Motl, McAuley, & Snook, 2007), stress management (Antoni et al, 2006), and treatment regimens (Baer & Roberts, 2002). However, the quality of life literature has failed to focus on family

dynamics in relation to quality of life. The scant number of quality of life studies that have included family dynamics added family dynamic only as a secondary factor. Family dynamics, such as family functioning and family resilience, can influence multiple areas of an individual's life, including the rehabilitation process and, possibly, quality of life. Little research has been conducted on family functioning or family resilience in relation to quality of life. Understanding the relationship between family functioning, family resilience, and the quality of life for an individual with a disability may improve the rehabilitation process and outcome of such individuals.

### **Purpose of Study**

The purpose of this study is to (a) examine the relationship between family functioning and quality of life, (b) examine the relationship between family resilience and quality of life, (c) examine the family functioning patterns of individuals with a disability, and (d) examine the family resilience of individuals with a disability.

### **Research Questions**

RQ<sub>1</sub>: What is the relationship between family functioning and quality of life for an individual with a disability?

RQ<sub>2</sub>: What is the relationship between family resilience and quality of life for an individual with a disability?

## Hypotheses

Family functioning can be delineated into and measured through the three constructs of cohesion, flexibility, and communication (Olson & Gorall, 2003). Likewise, family resilience can be delineated into and measured through the constructs of belief systems, family organization, and communication/problem-solving (Walsh, 2003a). The hypotheses for each research question are based on the constructs of family functioning and family resilience.

RQ<sub>1</sub>: What is the relationship between family functioning and quality of life for an individual with a disability?

- Hypothesis 1: Balanced family cohesion will have a positive relationship with quality of life.
- Null Hypothesis 1: There will be no relationship between balanced family cohesion and quality of life.
- Hypothesis 2: Balanced family flexibility will have a positive relationship with quality of life.
- Null Hypothesis 2: There will be no relationship between balanced family flexibility and quality of life.
- RQ<sub>2</sub>: What is the relationship between family resilience and quality of life for an individual with a disability?
- Hypothesis 1: Family belief systems will have a positive relationship with quality of life.
- Null Hypothesis 1: There will be no relationship between family belief systems and quality of life.

- Hypothesis 2: Family organizational patterns will have a positive relationship with quality of life.
- Null Hypothesis 2: There will be no relationship between family organizational patterns and quality of life.
- Hypothesis 3: Family communication/problem-solving will have a positive relationship with quality of life.
- Null Hypothesis 3: There will be no relationship between family communication/problem-solving and quality of life.

### **Definition of Key Terms**

**Chaotic:** In a chaotic family system, the leadership is erratic or limited. Decisions are impulsive, and roles are unclear and often shift among members (Olson & Gorall, 2003)

**Communication:** refers to the family's listening skills, speaking skills, self-disclosure, and clarity (Olson & Gorall, 2003)

**Circumplex Model of Family and Marital Systems:** a model that illustrates the changes the family undergoes developmentally and in reaction to stressors (Olson & Gorall, 2003)

**Cohesion:** the emotional bond between the family members and the degree of individual autonomy (Franklin, Streeter, & Springer, 2001; Olson & Gorall, 2003; Winek, 2010)

**Disengagement:** refers to relationships within a family system that are extremely emotionally separate and extremely independent, with little involvement among family members (Olson & Gorall, 2003)

**Enmeshment:** a type of family structure with extremely diffused boundaries and an overly strong pressure for togetherness (Walsh, 1998)

**Family:** persons with whom an individual feels a close relationship with; family can be friends and/or blood or legal relatives (Frain et al, 2008; Sixbey, 2005)

**Family Functioning:** the patterns of relating or family processes over time (Winek, 2010)

**Family Life Cycle:** developmental cycles throughout the course of the family that involves six stages: courtship, marriage, childbirth and young children, adolescent children, launching, and old age (McGoldrick & Carter, 2003; Winek, 2010)

**Family Resilience:** the family's ability to withstand and rebound from disruptive life challenges (Walsh, 2003a)

**Family System:** The relationships between the individuals involved in the family (Hanna & Brown, 1999)

**Flexibility:** the ability of the family system to change its power structure, roles, and rules (Franklin et al, 2001; Olson & Gorall, 2003; Winek, 2010)

**Individual Resilience:** an individual's ability to adjust positively to an adverse event or stressor (Walsh, 2003a)

**Onset of Disability:** the time when a family member acquires, is diagnosed with, or is born with a disability

**Quality of Life:** satisfaction in different life areas within the context of an individual's culture and value system (Bishop et al, 2002; Frain et al, 2008)

**Rigid:** in rigid family systems, there is often one person in charge who is highly controlling; in addition, roles are strictly defined, and rules do not change (Olson & Gorall, 2003).

**Role:** the responsibilities and relationships one has within the family; for example, one could be a father to children, husband to a wife, adult child to parents, and a brother to siblings. Each role is unique, with its own tasks and responsibilities (Winek, 2010).

**Role Strain:** occurs when the responsibilities and relationships are too demanding for the individual

**Rules:** the appropriate behaviors for each position within the family (Winek, 2010)

**Stress/Stressor:** a demand placed on the family that produces, or has the potential of producing, changes in the family system (McCubbin, Thompson, & McCubbin, 1999)

### Summary

The onset of a disability can have far-reaching effects on the family system and the quality of life of both the family and the person with a disability. Family function and family resilience can affect multiple aspects of an individual's life, including quality of life. Quality of life is "often seen as the ultimate rehabilitation goal" (Livneh, 2001).

Therefore, it is vital to understand the relationship between family functioning, family resilience, and quality of life. The next chapter will further discuss quality of life, family resilience using Walsh's Family Resilience Model, and family functioning using Olson's Circumplex Model for Marital and Family Systems. A discussion of these topics and a literature review will be provided, including research conducted on quality of life and

variables such as family resilience, family functioning, family cohesion and adaptability, family relations, and social support.

## CHAPTER 2

### REVIEW OF THE LITERATURE

The concept of quality of life has become an important area of study within the field of rehabilitation counseling; it has also been examined in multiple areas (Bishop et al, 2002; Frain et al, 2008). There is, however, a paucity of research on family functioning and family resilience and its effect on quality of life. A review of the literature has been conducted in order to determine the relationships of family functioning (focusing on flexibility, cohesion, and communication), and of family resilience with an individual's quality of life. The empirical articles reviewed date from 1998, although year limitations were not set. One possible reason for the lack of literature is that quality of life was first measured in terms of health related factors within the medical field. Only recently did quality of life move beyond health function to include all aspects of an individual's life. In addition, it was only recently when adjustment to disability evolved into quality of life.

For the purpose of this literature review, the exclusion criterion were determined by the study's focus on people with disabilities. Thus, this review excluded studies that did not include people with disabilities as participants and only studies about either family functioning or family resilience and quality of life were included. While there is ample literature and research on such topics as quality of life, family resilience, and family functioning, there is a paucity of research that examines both quality of life and either family resilience or family functioning for people with disabilities. While a limiting factor was that each study involved people with disabilities, the studies focused more on family or quality of life and not on the disability or the relationship between

disability and either family functioning or quality of life. Therefore, the literature is skewed towards family, with disability being a secondary focus. In the literature search, the following Internet search engines were used: Google Scholar, Psychological and Behavioral Sciences, PsychInfo, PsychArticles, ERIC, PubMed, and Academic Search Premier. The search terms used were quality of life, rehabilitation counseling, disability, disability centrality model, family, resilience\*, cohesion, family resilience\*, family resilience assessment, and family functioning. The review of the literature can be divided into three categories: quality of life, family resilience, and family functioning.

### **Quality of Life**

The concept of quality of life has a long and productive history, having been studied and written about extensively in the last 30 years (Bishop, 2005b; Schalock, 2004). Within the field of rehabilitation, quality of life has stemmed from two different foci to merge into the current quality of life concept. The original idea of quality of life has been applied to the concept of adjustment or acceptance of disability.

Dembo, Levin, and Wright (1956) studied the acceptance of the loss of a limb. Through their research, they developed a theory of acceptance of loss. The acceptance of loss that results from a disability is not accepting one's misfortune; rather, it represents a change in the individual's values. The specific processes that undergo change in the acceptance of loss, include enlargement of the scope of values and the change from comparative values to asset values. This theory laid the groundwork for Wright's (1983) adjustment to disability theory. Wright concluded that when an individual acquires a disability, he/she enters into an adjustment period where values are changed in order to

accept one's disability. Wright (1983) expanded on the two value changes laid out by Dembo et al, (1956) by adding two more value changes. The first value change process discussed earlier is the enlargement of the scope of values. This change is typically the first to occur when preoccupation with loss is intense, following a trauma, loss of functioning, or limitation in functioning (Keany & Glueckauf, 1993; Wright, 1983). The enlargement of the scope of values occurs when an individual finds meaning or satisfaction in the existing values, activities, and goals (Keany & Glueckauf, 1993; Wright, 1983). The subsequent processes do not typically occur in any order (Keany & Glueckauf, 1993). Another value change is the transformation of the comparative-status values to asset values. This occurs when an individual no longer compares his/her quality or ability to others, what is 'normal', or on a scale (Keany & Glueckauf, 1993; Wright, 1983). Instead, the focus of an individual's quality or ability is based on the specific assets of the individual, without any comparison to others (Wright, 1983). The containment of disability effects, another value change, results when the disability is not viewed as globally debilitating (Wright, 1983). For example, if an individual has a visual impairment, other people or the individual do not assume limitations in hearing or in the other sensory functions. The final value change is the subordination of the physique relative to other values. This occurs when the worth of a person is no longer determined by physical abilities or appearance, but by abilities and characteristics inherent within the individual (Keany & Glueckauf, 1993; Wright, 1983).

Adjustment to disability has evolved from a medical model perspective to a psychosocial perspective (Bishop, 2005a; Schalock, 2004). Under the medical model, adjustment to disability has been thought to be related to the type or severity of disability,

but “has consistently failed to serve as an important predictor of an individual’s overall adaptation” (Bishop, 2005a, p. 220). It has also failed to account for meaning ascribed to the disability. The theory of adjustment to disability often does not account for the cyclical nature of living with a disability, including a stable disability (Smart, 2009). It has been argued that “adjustment to” and “acceptance of disability” are inappropriate terms to use; instead, “reaction” and “response” are more correct terms (Parker, Schaller, & Hansmann, 2003; Smart, 2009). Smart (2009) argued that the terms “acceptance” and “adjustment to disability” pathologize disability, suggest that adjustment to a disability is a one-time occurrence and not a process throughout the life cycle, and do not account for the different types of responses to a disability (i.e., psychological, occupational, social, and familial). “Response,” on the other hand, is not based on the disability itself, but on the meaning of disability in each individual’s life (Smart, 2009).

Over the last 30 years, there have been many changes in services provided to people with disabilities. Many of these services progressed from institution based to community-based, with a focus on the individual’s life in the community (Schalock, 2004). Changes to services have also developed through civil rights for people with disabilities and through client empowerment (Schalock, 2004). The evolution from a problem-solution based model towards a model that focuses on the psychological and social aspects of the life of the individual has helped mold the quality of life concepts.

The term “quality of life” originated in the healthcare field focusing primarily on symptom reduction and on the individual’s progress toward “normal” functioning (Schalock, 2004). This concept of quality of life is founded in the medical model of disability in which the individual has a problem and quality of life is related to the

minimization of the problem (Bishop, 2005b; Cummins, 2005; Schalock, 2004). While this concept of quality of life was beneficial to the medical field in terms of improving treatment, it was a very limiting viewpoint of the individual's life. When quality of life is related only to functioning or to the lack of disease/symptoms, the other areas of an individual's life such as work, family, social relationships, or psychological well-being are not included (Giacobbi, Stancil, Hardin, & Bryant, 2008; Tschopp et al, 2009). Quality of life is presently being studied in the medical field, but is now termed "health related quality of life" (HRQOL) (Giacobbi et al, 2008). From the early focus on medical functioning, quality of life has now shifted towards a more holistic approach, including all aspects of an individual's life and well-being.

Unlike adjustment to disability, quality of life takes into account individual differences, and the individual's ability to recognize both positive and negative experiences, and the individual's responses to disability (Bishop, 2005b). Therefore, quality of life has become an important focus of theory, practice, and research, not only in rehabilitation (Bishop et al, 2002; Frain et al, 2008), but also in medicine, economics, and various social sciences (Cummins, 2005). The short definition of quality of life is the "satisfaction one has in different areas of life" (Bishop et al, 2002, p.88). Frain et al, (2008) further defined quality of life as an "individuals' perceptions of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards, and concerns" (p. 17). Personal and environmental factors influence quality of life (Cummins, 2005; Frain et al, 2008). Indeed, the objective and subjective components that comprise quality of life are the same for everyone; however, it is the individual's culture that places a different value set to each component

(Cummins, 2005). Quality of life includes empowerment, resources, a purpose in life, control, and a sense of belonging (Bishop, 2005b; Cummins, 2005; Frain et al, 2008). These components of quality of life are manifested through life domains. Both Bishop (2005a) and Schalock (2004) conducted literature reviews to determine the most frequent and consistent domains studied. They found physical health, emotional health, interpersonal relationships, material well-being, and personal development or productive activity are the most frequent domains studied. Schalock (2004) also added rights, self-determination, and social inclusion.

Quality of life has been studied in multiple areas such as healthcare and education/special education (Schalock, 2004), coping skills (Schwartz, 1999), employment self-efficacy (Tsaousides et al, 2009), physical activity (Motl et al, 2007), stress management (Antoni et al, 2006), and treatment regimens (Baer & Roberts, 2002). It has also been examined in relation to specific disabilities including, spinal cord injury (Krause & Reed, 2009), traumatic brain injury (Tsaousides et al, 2009), multiple sclerosis (Motl et al, 2007), arthritis (Zautra et al, 1995), cancer (Antoni et al, 2006), substance abuse (Becker, Curry, & Yang, 2009), intellectual disabilities (Brown et al, 2009), physical disabilities (Giacobbi et al, 2008), and HIV (Baer & Roberts, 2002).

While there is an abundance of information on quality of life, only few researchers investigated its relationship to family dynamics or family resilience. Bishop et al, (2002) conducted a study on the physical and psychological factors that affect the quality of life of individuals with epilepsy. The participants were recruited through the Wisconsin chapters and one Illinois chapter of the Epilepsy Foundation. The questionnaire was available to participants through the web or by paper and pencil. The

factors included general health, mental health, employment, and social support. The researchers used the Personal Resource Questionnaire Part 2 (PRQ-85-2) to measure social support; the Medical Outcome Study 36-Item Short-Form Health Survey (SF-36) to measure health related quality of life or impact of epilepsy on daily living (considered an independent variable); and the Life Satisfaction Survey (LSS) was used to measure the dependent variable, that is, quality of life, with a Cronbach's alpha of .93 for the study. The PRQ-85-2 had a Cronbach's alpha of .93 for the study. Internal consistency for the SF-36 on the mental health, general health, and physical functioning subscales were .89, .89, .93, respectively. Validity was reported as high for the LSS, but not reported for the other assessments used. There were 560 invitations sent to potential participants of the study; the results are based on 170 usable returned responses. The researchers used path analysis to test the proposed model, forward stepwise multiple regression to establish the magnitude of total effects, regression analyses to estimate the model, and a Pearson product moment intercorrelation analysis to find the relationships between the variables. The researchers found that social support, mental health, general health, and seizure frequency were good predictors of quality of life.

Orbuch, Perry, Chesler, Fritz, and Repetto (2005) conducted a study that investigated the relationship between parent-child relationships and quality of life for children with cancer. The participants were randomly selected from a larger study of 900 survivors of childhood cancer; the sampling pool consisted of 335 long-term survivors of cancer. Of those 335, 190 individuals agreed to participate. A demographic sheet was used to obtain information related to the age of diagnosis, type of diagnosis, gender, and aftereffects of treatment. The quality of the parent-child relationship was measured by

asking the child to assess his/her relationships with both the mother and the father; the questions were adapted from a prior study. Quality of life was measured using the Quality of Life-Cancer Survivors Scale (QOL-CS). The parent-child relationship questions were reported to have high reliability, with a Cronbach's alpha of .89 for mothers and .92 for fathers. The reliability for the QOL-CS was reported high, with a Cronbach's alpha varying among the five subscales between .77-.92. The researchers used t-tests to determine if the survivors perceived differences between their relationships with the father and mother; Pearson product-moment correlations were used for all the variables; hierarchical ordinary least squares regression analyses were used with the demographic and health factors that are related to quality of life. Orbuch et al, (2005) found that the father-child relationship is associated with the survivors' overall quality of life and the psychological, spiritual, and social domains of quality of life. The mother-child relationship was found to be associated with only the psychological domain of quality of life. Quality of life was also impacted by the interference of after-effects: the more interference, the lower the quality of life.

### **Family Resilience**

Although social support and family relationships have been studied as predictors of quality of life, limited studies have been conducted on family resilience, or the way in which the family overcomes and grows from adversity or stressful events.

The topic of resilience, that is, the positive adaptation from significant adverse events (Walsh, 2003a), has experienced increasing attention over the last three decades (McCubbin et al, 1996). Orbuch et al, (2005) defined resilience as "the ability and

competency of individuals or families to exhibit positive consequences given the stress and hardship associated with adverse and distressing situations” (p. 172). Resilience sprang from researching children, who despite terrible life conditions (e.g., poverty, abuse), were able to succeed in life (Sixbey, 2005). When studying these children, researchers began to focus on an innate ability within the individual to ‘bounce back’ (Luthar & Ziegler, 1991). Researchers termed this ability, “resilience.” There has been a discussion on the use of the terms “resiliency” vs. “resilience” (Sixbey, 2005). Resiliency is thought to be a state-like trait within the individual, while the term resilience denotes a process (Luthar, Cicchetti, & Becker, 2000; Sixbey, 2005) in which an individual may not be resilient in every situation.

In the beginning, resilience was primarily associated with individual children. The family was viewed as dysfunctional and, most often, the cause of the adverse events. However, through happenstance, researchers began to observe that resilience was not only an individual process, but also a family systems process (Sixbey, 2005). Werner and Smith (1977) and Cicchetti and Rogosch (1997) were the primary researchers on family resilience (Sixbey, 2005). From their research, an evolution toward a more systemic view of resilience was initiated. Family was no longer viewed as damaged, dysfunctional, and problematic; instead, it was viewed as being challenged by life events (Walsh, 2003a). Moreover, McCubbin et al, (1996) expanded the definition of resilience to include family, defining resilience as the positive behavioral patterns and functional competence of both the individuals and the family unit under stressful or adverse circumstances; these positive behavioral patterns and functional competence determine the family’s ability to

recover by maintaining the family's integrity as a unit while insuring, and where necessary restoring, the well-being of the family members and the family unit (p. 5).

This evolution to family resilience focuses on understanding what the family does well, the positive ways the family functions, and attempts to build on the positives to help the family improve not only its overall functioning, but also its ability for problem-solving, coping, and adjusting (Frain et al, 2008). Family resilience is grounded in family systems theory, which focuses on the entire family network and the way in which the family functions and adapts to adversity or stress (Walsh, 2003a). Walsh (2003a) noted that families have built in processes that enable the family members to handle stress, come together during a crisis, and move towards optimal adaptation.

McCubbin et al, (1996) stated that there are five assumptions of family life: (a) hardships and challenges are a part of the family life cycle; (b) families have patterns and ways of functioning to protect the family during transition and change, and to foster growth and development in all family members; (c) families have patterns of functioning to provide protection from major stressors and change; (d) families draw from and contribute to the community around them; and (e) families work to restore order, harmony, and balance even in the midst of crisis or change. As families advance throughout the family life cycle, they are faced with multiple changes and challenges. Some of these changes or challenges can be positive such as the birth of a child or the moving out of an adult child. However, there are changes and difficult challenges that families experience throughout the family life cycle. These changes include the death of a family member (whether parent or child) or the loss of a job. The changes within a family that cause disruption and stress are known as stressors (McCubbin et al, 1996).

Cumulative stressors, known as a pile-up of stressors, are often common. These stressors are a critical factor in families with a member who has a disability or chronic illness (McCubbin et al, 1996; Walsh, 2003a). Each stressor and pile-up of stressors, whether positive or negative, forces the family into a period of adjustment in which roles, rules, and boundaries are forced to shift to meet the demands of the change. The pile-up of stressors can have an adverse effect on an individual's quality of life.

Rarely do families or individuals return to their pre-change functioning (Sixbey, 2005; Walsh, 2003a). Walsh (2003a) argued that the term "bouncing back," which is commonly used to describe resilience, is inappropriate. Instead, she proposed that bouncing "forward" is a more "apt metaphor" (Walsh, 2003a, p. 10) to explain the functional changes within a family system following a stressor or adverse event. Although change, challenges, and traumatic life events can alter roles, rules, and boundaries within a family, the family system works towards returning a similar pre-change functioning.

Walsh (2003a) defined three key processes in family resilience, with each key process consisting of three sub-processes. These key processes are belief systems, organizational patterns, and communication/problem-solving. The three key processes developed by Walsh have been "informed by clinical and social research" (Walsh, 2003a, p. 6) and occur within healthy, well-functioning families.

### **Belief Systems**

Often, family belief systems are the lens through which families view the stressor, event, suffering, and options (Walsh, 2003a). Walsh (2003a) stated, "Resilience is fostered by shared, facilitative beliefs that increase options for problem resolution,

healing, and growth. They help members make meaning of crisis situations; facilitate a hopeful, positive outlook; and offer transcendent or spiritual moorings” (p. 6). Within a family’s shared belief system are three sub-processes: making meaning of adversity, a positive outlook, and transcendence and spirituality.

**Making Meaning of Adversity.** In times of stress, change, or crises, families find strength in uniting to view adverse events as a shared experience, and as an individual experience (Walsh, 2003a). Families are able to normalize their experience by recognizing that adversity is a natural part of the family life cycle (Sixbey, 2005; Walsh, 2003a). By recognizing the stressful event, families transform the adversity from a crisis to a comprehensible, manageable, and meaningful challenge (Walsh, 2003a). Families also attempt to “make sense of their adversities” by asking questions such as how the event happened, why it happened, and what can be done (Sixbey, 2005).

**Positive Outlook.** Optimism and hope have been linked to coping with and overcoming barriers to success (Walsh, 2003a). Hope and optimism, then, are vital traits for families in increasing resilience. Walsh (2003a) argued that just as helplessness is learned, so too can optimism be learned and cultivated within a family system. Other aspects of having a positive outlook include perseverance and initiative (Walsh, 2003a). Hope that the family as a whole can “make it through” the adverse event and finding unique solutions are vital traits of resilience (Walsh, 2003a). One way to reinforce hope and optimism is by strengthening familial relationships and social relationships (Sixbey, 2005). These relationships can provide examples and encouragement (Sixbey, 2005).

**Transcendence and Spirituality.** Cultural and religious beliefs provide families with strength, comfort, and guidance by providing meaning and purpose to adversity

(Walsh, 2003a). Through her research, Walsh (2003a) found links between both formal and informal religious affiliation and practices of resilience (Walsh, 2003a). Spirituality does not have to imply a belief in a God or a Supreme Being. One informal source of spirituality is a close relationship with nature (Walsh, 2003a).

### **Family Organizational Patterns**

Family resilience is influenced by flexibility within the family, cohesion, and social and economic resources that interact to make the patterns of functioning. Family patterns lead to either healthy functioning or unhealthy functioning (Walsh, 2003a). Healthy functioning families are families who are balanced, or not extreme, in cohesion and/or flexibility (Winek, 2010). Unhealthy families, on the other hand, are unbalanced, or extreme in cohesion and/or flexibility (Winek, 2010). Having strong social and economic resources is an important factor for families during adverse or stressful events.

**Flexibility.** Flexibility is the family's ability to change and adapt to life events (Sixbey, 2005). However, families still require structure within flexibility (Sixbey, 2005; Walsh, 2003a). A family that has set rules, roles, and boundaries, but is also flexible, is likely to adapt well to change (Walsh, 2003a). Healthy functioning families strive to maintain stability and continuity with the family system while adapting to various life events. Healthy functioning can help families when faced with adverse changes (Walsh, 2003a).

**Connectedness.** Connectedness is the collaboration, unity, loyalty, and mutual support among family members (Sixbey, 2003). However, like flexibility, there is another side. Families must also respect personal boundaries, autonomy, and the individuation of family members (Sixbey, 2005; Walsh, 2003a). A resilient family system is one in which

family members can turn to one another for support, comfort, and understanding, yet still maintain their individuality (Walsh, 2003a).

**Social and Economic Resources.** Personal ties such as friends, extended family, religious organizations, and mentors are a vital part of resilience (Walsh, 2003a). Other social resources such as support groups, agencies, and community resources are also important (Walsh, 2003a). Walsh (2003a) argued that financial security is an important aspect of resilience. The loss of wages, due to the onset of a chronic illness or disability to a family breadwinner, can increase pile-up stressors. Access to quality services and flexible working conditions helps provide the resources that are necessary to improve the resilience in families that struggle financially (Walsh, 2003a).

### **Communication/Problem-Solving Processes**

Family communication allows for a clear understanding of the adverse event for the family members, fosters expression of feelings, and provides the means for problem-solving; family communication, in turn, encourages effective family functioning (Walsh, 2003b). Culture plays an integral part in communication because each culture has specific norms for sharing sensitive information and feelings (Walsh, 2003b). There are two functions of communication. First, content refers to the information, opinions, or feelings that are shared throughout the family. Second, communication defines the nature of the relationship (Sixbey, 2005).

**Clarity.** Clarity refers to clear consistent messages within family communication (Walsh, 2003a). Family functioning is increased when communication is both clear and congruent. Hiding or not discussing adverse life events with children or with a spouse can lead to unnecessary anxiety. Family members who are aware of a problem, without

knowing the extent of it, often fear for the worst or imagine that the problem is bigger than it truly is (Walsh, 2003a). Walsh (2003a) stated, “Clarifying and sharing crucial information about crisis situations and future expectations such as a medical prognosis, facilitate meaning-making, authentic relating, and informed decision making, whereas ambiguity or secrecy can block understanding, closeness, and mastery” (p. 12). Cover-up and denial of situations can lead to estrangement among family members and inhibit recovery (Walsh, 2003a). On the other hand, sharing and communicating between family members encourages healing (Walsh, 2003b).

**Emotional Expression.** The onset of changes, stressors, and adverse events can cause a myriad of emotions among all the family members (Walsh, 2003a). Emotional expression is open communication within an environment of “mutual trust, empathy, and tolerance” (Walsh, 2003a, p. 12). During adverse events, it is important for families to foster positive feelings and interactions in order to counterbalance the negative feelings and interactions (Sixbey, 2005). These positive interactions assist families in coping and to “transcend their immediate distress” (Sixbey, 2005, p. 40).

**Collaborative Problem-Solving.** Collaborative problem-solving is brainstorming and reaching solutions as a family (Sixbey, 2005; Walsh, 2003a). This includes involving each family member in goal setting and in mapping out steps to achieve those goals (Walsh, 2003a). Resilient families build on their successes, including small ones, and learn from failures (Walsh, 2003a). Families that demonstrate these traits are better able to manage adverse events, promote cohesion, predictability, and marital and familial satisfaction (McCubbin et al, 1996). These traits also develop, restore, and/or maintain harmony and balance within the family system (McCubbin et al, 1996).

The family resilience model developed by Walsh has multiple benefits. First, the focus is on family strength in times of stress or when facing an adverse event (Walsh, 2003a). The family, as a whole, is seen as being capable of overcoming adversity and ‘bouncing forward,’ which can impact an individual’s quality of life (Walsh, 2003a). Second, the family resilience model accounts for variance in families by assessing functioning based on context, values, structure, resources, and life challenges (Walsh, 2003a). Third, family and individual functioning vary throughout the family life cycle, impacting the family’s resilience (Walsh, 2003a). Finally, the family resilience model holds that any family has the ability to recover and grow out of adversity (Walsh, 2003a). There are multiple factors of family functioning that play a role in resilience and, ultimately, in each individual family member’s quality of life. These factors include quality communication between family members; the maintenance of family flexibility; the maintenance of family cohesion; the maintenance of family boundaries, routines, traditions, celebrations, and patterns; family coping methods; family problem-solving abilities; social support and the maintenance of social relationships within the community; and shared spiritual beliefs, specifically in attributing positive meaning to adverse events (McCubbin et al, 1996; Singer & Powers, 1993).

Frain et al, (2008) conducted a study that sought to determine predictors of quality of life in individuals with HIV/AIDS. The predictors studied included uncertainty, optimism, and family resilience. The participants were recruited through websites, flyers distributed at AIDS/HIV awareness activities, personal ads, and individual letters. The participants were invited to complete an on-line survey. The researchers used the HIV/AIDS Targeted QOL Scale (HAT-QOL) to measure the dependent variable, quality

of life. The Family Crisis Oriented Personal Evaluation Scales (F-COPES), the Family Inventory of Resources for Management (FIRM), and the Family Coping Coherence Index (FCCI) measured family resilience. Uncertainty was measured by the Mishel Uncertainty in Illness Scale (MUIS) and optimism was measured using the Life Orientation Test-Revised (LOT-R). For this study, the internal consistency for the FCCI was .49, F-COPES was .87, FIRM was .95, MUIS was .92, LOT-R was .90, and HAT-QOL was .91. Thus, the overall reliability of the assessments used was good. Validity was established for the FIRM, but not for the other assessments.

The researchers used a variety of data analyses. First, multiple regression and correlation analyses measured the impact of family and cognitive appraisal on quality of life. Next, the researchers used hierarchical regression to determine the proportion of variance that each independent variable predicted in quality of life. The results are based on 125 usable surveys.

The researchers found that quality of life correlated with family resilience, optimism, and uncertainty. After accounting for multicollinearity effects regression analyses were conducted. Using hierarchical regression, the researchers found that family resilience factors accounted for only about 1% of the variance in quality of life, when added after the cognitive variables and disease progression. Disease progression accounted for 61.8% of the total variance. Because the variance explained by family resilience variables overlapped with the cognitive variables in the variance of quality of life, family resilience “failed to make a unique contribution in predicting QoL” (Frain et al, 2008, p. 23). However, when computed alone, family resilience was seen to be a significant predictor of quality of life.

Tschopp et al, (2009) conducted a study focusing on factors of empowerment related to work quality of life. The participants were adults with disabilities who were recruited through websites, individual letters, flyers distributed at disability related activities, and personal ads. The participants completed a questionnaire online. Factors of empowerment included self-efficacy, self-advocacy, stigma, and family resilience as measured by family coping and appraisal. The dependent variable was quality of life. The Liverpool Self-Efficacy Scale (LSES) measured self-efficacy. The Patient Self-Advocacy Scale (PSAS) measured self-advocacy, and stigma was measured with the Attitudes of Others Scale (AOS). Family resilience was measured in terms of coping using the F-COPES. The Domain Specific Clinical-Centrality Quality of Life Scale (DSC-C) measured work quality of life. The internal consistency of the instruments were .84 (LSES), .91 (AOS), .81 (PSAS), and .87 (F-COPES); Cronbach's alpha for DSC-C ranged from .70 to .86.

Pearson product moment correlations were used to determine the association between variables. To examine the work status differences, a logistical regression was used. A regression analysis measured the amount of variance in which the models were able to predict work status. The results are from 70 usable of the 93 total returned surveys. The variables only predicted work status with a low 73% accuracy. Individual empowerment was not shown to be predicted by work status. Work satisfaction, control, and interference highly correlated with self-advocacy, ranging between  $r = 0.24$  and  $r = -0.39$ . The variance in self-efficacy was largely accounted for by work satisfaction, control, and interference, with variance ranging from 11% to 25%. There was a high correlation between work satisfaction and perceived control in work.

## **Circumplex Model of Marital and Family Systems**

Family resilience is intertwined with family functioning. However, the family resilience model developed by Walsh (1998) does not account for the changes that occur within a family following a change or adverse event. The Circumplex Model of Family Functioning (Circumplex Model) is a model that specifically illustrates the changes a family system undergoes developmentally in reaction to an adverse event or a major life change (Olson & Gorall, 2003). As discussed, these changes can be perceived as positive or negative. Similar to the family resilience model, the Circumplex Model is grounded in family systems theory (Olson & Gorall, 2003) and was developed for use in family research, clinical assessment, treatment planning, and outcome effectiveness of marital and family therapy (Olson & Gorall, 2003). Since the development of the Circumplex Model more than thirty years ago, it has been tested in more than 500 studies, making it one of the most recognized and utilized models of family functioning (Winek, 2010).

There are three assumptions of the Circumplex Model, according to Olson and Gorall (2003). First, balanced families generally have more adequate functioning across the life cycles. A family is considered balanced if it functions within the middle levels of cohesion and adaptation (Olson & Gorall, 2003). If the family is extreme in rigidity, flexibility, enmeshment, or disengagement, the family is considered unbalanced (Olson & Gorall, 2003). Also, if cultural group norms support extreme patterns of functioning (e.g., Amish, family farms), families can function well if all members desire the family to function in that way. Second, positive communication skills allow balanced families to adapt or change their level of flexibility and cohesion. Third, families modify levels of

cohesion and/or flexibility to effectively deal with stress and changes across the family life cycle.

There are three dimensions to the Circumplex Model: cohesion, flexibility, and communication. Cohesion and flexibility both have a curvilinear relationship with family functioning (Winek, 2010). Family communication, as a facilitating dimension of family functioning, is the catalyst in altering the family's level of both cohesion and flexibility (Olson & Gorall, 2003).

### **Cohesion**

Cohesion has a curvilinear relationship with family functioning, with enmeshment (togetherness) on one end and disengagement (separateness) on the other end (Olson & Gorall, 2003). Enmeshment and disengagement are clinical terms; but, Olson and Gorall (2003) suggest using the terms "togetherness" and "separateness" when speaking with clients. Enmeshment is the emotional bond and the relationship between family members including, boundaries, coalitions, time, space, friends, decision making, interests, and recreation (Olson & Gorall, 2003; Thomas & Olson, 1994). The second aspect of cohesion is disengagement, which is being separate from the family, spending time apart, independence, and separate activities (Olson & Gorall, 2003; Thomas & Olson, 1994). The ideal is to find a balance between togetherness and separateness. If a family has too much togetherness, the family members are enmeshed. Enmeshment leads to unhealthy family functioning and eliminates autonomy and independence (Olson & Gorall, 2003). However, if there is too much separation between family members, the family is disengaged, unbalanced, and functioning at an unhealthy level (Olson & Gorall, 2003). Too much separation can lead to a lack of loyalty and emotional closeness among

the family members (Olson & Gorall, 2003). This can be problematic when dealing with a stressor or adverse life event.

Cohesion is measured on five different levels, starting with disengaged/disconnected (extremely low), somewhat connected (low to moderate), connected (moderate), very connected (moderately high), to enmeshed/overly connected (extremely high) (Olson & Gorall, 2003). Functioning between moderately low to moderately high levels of cohesion is considered healthy functioning and the family system is considered balanced (Franklin et al, 2001; Olson & Gorall, 2003).

### **Flexibility**

In the past, theorists focused on the family's attempt to maintain status quo (Olson & Gorall, 2003). Maintaining status quo refers to the families striving to return to familiar patterns of functioning when they deviate from their usual patterns (Olson & Gorall, 2003). By studying the maintenance of status quo, theorists began to understand the value of adaptability or flexibility within a family system (Olson & Gorall, 2003).

Flexibility is the family system's ability to adapt or change its roles, rules, and power structure in the face of situational or developmental stress (Franklin et al, 2001; Winek, 2010). Family flexibility also includes the ability to change leadership in terms of discipline and decision making and to change the negotiation style of the family (Olson & Gorall, 2003). As with cohesion, flexibility has a curvilinear relationship with family functioning (Olson & Gorall, 2003). Too much flexibility leads to chaos and dysfunction. Too much rigidity, on the other hand, leads to dysfunction and an inability to change.

There are five levels of flexibility for families: rigidity/inflexibility (extremely low), somewhat flexible (low to moderate), flexible (moderate), very flexible (moderate

to high), chaotic/overly flexible (extremely high). Families that function within the three middle levels are considered healthy or balanced; the two extremes are considered dysfunctional or unbalanced (Franklin et al, 2001; Olson & Gorall, 2003). It is important to find a balance between rigidity and flexibility. Families should have structure and stability, but also retain the ability to change when needed (Olson & Gorall, 2003).

As discussed earlier, family functioning changes throughout the family life cycle (Winek, 2010). Without the capability to change, families have difficulty in transitioning through the different stages. Olson and Gorall (2003) stated, “The ability to change, when appropriate, is one of the characteristics that distinguishes functional couples and families from dysfunctional ones” (p. 519). Olson and Gorall (2003), through their research, found that balanced families typically have better functioning throughout the entire life cycle than families who do not have balance. In fact, functioning in either extreme on both variables is often problematic for families throughout the family life cycle. Olson and Gorall (2003) also found that communication is a significant factor in balanced functioning. Families with good communication skills tend to have balance on both cohesion and flexibility. Likewise, families with poor communication often have poor functioning.

A family must change its way of functioning frequently throughout the family life cycle (Franklin et al, 2001; Winek, 2010). The family life cycle is made up of stages the family experiences. The first stage is the period when the couple first comes together; in this process, the couple combines two families and learns as a pair (McGoldrick & Carter, 2003). In the next stage, functioning changes when the first child is born. Often, the roles of the parents become more traditional (McGoldrick & Carter, 2003). The

family functions differently with young children than when the children become adolescents. At the latter stage, the children are more involved in the family and often take on more responsibility (McGoldrick & Carter, 2003). The next phase of the life cycle is the launching phase, that is, when adult children begin to leave the house for college, work, or to start a family of their own (McGoldrick & Carter, 2003, Winek, 2010). Next, the parents are empty nesters, with all the children grown and gone. Throughout each stage, families adapt their functioning to meet the needs of all family members. If we refer to the family resilience theory, one assumption stated that every family would be faced with challenges or adverse events to which they must adapt (Walsh, 2003a). The Circumplex Model also infers that families will be faced with stress and this stress will result in change. Olson and Gorall (2003) defined five principles of stress related change:

1. Families become more extreme in flexibility (becoming chaotic) and more extreme in cohesion (becoming enmeshed) during stressful events.
2. Communication typically increases within the family system.
3. After the stress has subsided, families typically return to a similar, but rarely the same type of system. This is similar to Walsh's bouncing forward concept in the family resilience model.
4. Families typically require six to twelve months to adjust to a major stress.
5. Balanced families typically become unbalanced during stress and later return to a balanced system.

Family functioning can influence the individual (Minuchin, 1980; Testa, Malec, Moessner, & Brown, 2006; Versluys, 1980). Many scholars agree that the family is

critical to successful outcomes of people with disabilities (Frain et al, 2007; Kosciulek et al, 1993), in addition to rehabilitation outcomes (Sander et al, 2002), medication use (Berglund et al, 2003), the therapeutic working alliance (Sherer et al, 2007), vocational outcomes (Kaplan, 1990; Lindstrom et al, 2007), coping (Power & Hershenson, 2003), and expression of pain (Turk, Kerns, & Rosenberg, 1992). However, one area in which family functioning may be limited is quality of life.

Grey, Boland, Yu, Sullivan-Bolyai, and Tamborlane (1998) conducted a study of factors that affect quality of life in adolescents with diabetes. The factors studied included individual self-efficacy, depression and coping, family behavior and function, and HbA<sub>1c</sub> (hemoglobin). The researchers invited attendees of the Yale Children's Diabetes Program to complete a questionnaire. Self-efficacy was measured using the Self-Efficacy for Diabetes Scale (SED); depression was measured using the Children's Depression Inventory (CDI); coping was measured by using the Issues in Coping with Insulin-Dependent Diabetes Mellitus Scale (ICD) and the Adolescent Coping Orientation for Problem Experiences Scale (A-COPE); family behavior was measured using the Diabetes Family Behavior Scale (DFB) and the Family Adaptability and Cohesion Scale (FACES-II); quality of life was measured using the Diabetes Quality of Life: Youth Scale (DQOLY); and HbA<sub>1c</sub> was measured through a blood test. The instruments used had excellent reliability, with a Kuder-Richardson reliability coefficient of .90-.92 (SED), internal reliability of .71-.87 (CDI), .78-.90 (ICD), .86 (A-COPES), .86 (DFB), .78-.90 (FACES-II), and .82-.85 (DQOLY). Validity was not specifically given, but the researchers ascertained all instruments to have good validity.

The analyses used included bivariate correlations to estimate the relationship between the personal and family factors and quality of life. Also used was a regression model with stepwise entry. The results are based on 52 subjects. The researchers found that adolescents reported families as warm, caring, flexible, and connected. Families that are perceived as being warm and caring were correlated with higher satisfaction in quality of life. The researchers found no significant correlations between family adaptability, cohesion, and quality of life.

Barrera, Pringle, Sumbler, and Saunders (2000) conducted a study on correlates of quality of life and behavioral adjustment with family functioning. The researchers asked parents to complete surveys on family factors (maternal psychological adjustment and family functioning) and child factors (child's adaptive functioning levels, child's emotional and behavioral problems, and medical and demographic data). The researchers also conducted in-depth interviews with parents and observed children. To measure maternal psychological adjustment, the researchers used the Beck Depression Inventory (BDI) and the State-Trait Anxiety Inventory (STAI). The FACES-III was used to measure family functioning. The Vineland Adaptive Behavior Scale (VABS) was used to measure the child's adaptive functioning levels. To measure the child's emotional and behavioral problems, the researchers used two forms of the Child Behavior Checklist (CBCL), one for ages 2-3 and one for ages 4-18, and the Pediatric Oncology Quality of Life Scale (POQOLS). All measures reported good reliability with .69-.84 (VABS), .67-.87 (POQOLS), .60-.83 (BDI), test-retest reliability of .82-.92 (CBCL) and .83, .80 (cohesion and adaptability, respectively for FACES-III). Validity was judged as high for all the assessments with the exception of the VABS and STAI, which were reported to be

of adequate validity. The results are based on 26 of the 62 original participants. The remaining participants were not included in the results due to death (38%), attrition (10%), and not reaching the 6-month point (11%). Using multiple bivariate correlation methods, Barrera and colleagues found that at 6 months post-bone marrow transplant, quality of life was most strongly related to family cohesion levels prior to the transplant.

Kager et al, (2000) conducted a study on patients from inpatient and outpatient mental health care centers and psychiatric wards in Austria. The study focused on examining the structure of families with a member with a psychiatric disability and to find correlations between family functioning, social functioning, and quality of life. The researchers asked the patients and relatives to complete interviews and surveys. To measure family functioning, the researchers used the German short-version of the FACES-III. The Quality of Life Enjoyment and Satisfaction Questionnaire (Q-LES-Q) was used to measure quality of life, and the Social Functioning Questionnaire (SFQ) was used to measure social functioning in relationships, work, housekeeping, and leisure time. The authors did not include any reliability or validity information. Although the FACES-III has been shown to have good reliability and validity, the researchers used the German short version, and therefore, the reliability and validity for this particular study are unclear. The researchers analyzed the data using chi-square tests in order to examine the relationships between the categorical variables and t-tests to analyze the continuous variables. The results were based on 297 patients with a psychiatric disability and 89 relatives.

The researchers found families with a member with a psychiatric disability to exhibit lower levels of cohesion and extremely low levels of adaptability. In other words,

the family members were disengaged or were separate from one another and the family structure was highly rigid. In addition, a relationship was found between family cohesion and adaptability with quality of life and social functioning. Low family cohesion was associated with problems in social functioning and low quality of life. Low adaptability was associated with low quality of life and weak social abilities.

Grenwald-Mayes (2001) conducted a study on the relationship between family environment and quality of life in college students with ADHD, compared to college students without ADHD. The researcher used the Quality of Life Questionnaire (QLQ) to measure quality of life and the Family Environment Scale (FES) and FACES-II to measure family functioning; demographic information was also obtained including ADHD related data. The three assessments were reported to have high reliability of .61-.96 (QLQ), .61-.78 (FES), and .87, .78 (cohesion and adaptability, respectively, FACES-II). Validity was not given for the assessments. The results were based on 37 undergraduate students with ADHD and 59 undergraduate students without ADHD. The researcher used chi-square analyses to determine any differences between the ADHD group and the non-ADHD group. An ANOVA was used to determine differences in quality of life and family functioning between ADHD and non-ADHD students. Multiple regression analyses and factor analyses were used to predict quality of life from family functioning for both groups. The two groups differed on the fathers' college level, having a family member with ADHD, marital status, and problems with alcohol or drugs. Students with ADHD had poorer parent-child relations, were less interested and had less involvement in political activities, were less successful with personal growth, and were less likely to present themselves in a socially desirable manner. Grenwald-

Mayes found differences between the two groups in terms of quality of life. The ADHD group scored significantly lower on overall quality of life than the non-ADHD group. Grenwald-Mayes also found that family functioning predicted 67.2% of the variance in quality of life.

Pereira, Berg-Cross, Almeida, and Cunha Machado (2008) conducted a study in Portugal on family factors that impact quality of life in adolescents with diabetes. The participants were a sample of convenience who were recruited through the diabetes pediatric unit at a major hospital in Portugal. The researchers focused on factors of family support and family functioning. Family support and functioning were measured by the Family Environment Scale (FES), which is reported to have a reliability between .75 and .78. Other scales used were the Diabetes Family Behavior Scale (DFBS), the Diabetes Quality of Life Scale (DQOL), and a self-report questionnaire on adherence, which was developed by the research team. The DFBS and DQOL were reported to have high reliability of .78-.91 and .90, respectively. The results were based on 157 children and adolescents. The researchers used descriptive statistics and partial correlations to identify the relationships between family, clinical, and demographic variables; and multiple regression analyses to determine the variables that predict quality of life. Pereira et al, (2008) found a significant correlation between quality of life and family conflict with a correlation coefficient of -0.23 and a correlation coefficient of -0.349 for quality of life and family social support. A significant relationship was not found between family cohesion and quality of life. Family social support and family conflict were found to be good predictors of quality of life for the study population.

## Findings from the Literature

The literature can be a good source of information. It can help guide future research in learning more about the relationship between quality of life and family resilience and function; it can also help in developing interventions and best practices for rehabilitation counselors. Overall findings from the research are discussed below.

- Family resilience, as an important factor of quality of life, can be used to predict an individual's overall quality of life.
- Variables associated with quality of life include the parent-child relationship, social support, family conflict, and family types.
- Family functioning may or may not be an important variable of quality of life.
- Quality of life was measured using a variety of assessments. Inconsistent findings on the factors and predictors of quality of life could be a result of using varying methods of measuring quality of life.

There is a discrepancy on whether family functioning has an impact on quality of life. Grenwald-Mayes (2001) suggested that overall family functioning has a strong relationship with quality of life. However, when focusing on cohesion, some researchers support cohesion as a variable of quality of life. Others do not. Barrera et al. (2000) and Kager et al. (2000) concluded that family cohesion was strongly related to quality of life. However, Pereira et al. (2008) and Grey et al. (1998) found no relationship between family cohesion and quality of life. The assessments used had similar reliability. Grey et al. (1998) and Pereira et al. (2008) both used the Diabetes Family Behavior Scale; the two studies were completed with families with a child who has diabetes. Barrera et al. (2000) and Kager et al. (2000) conducted their studies on participants with bone marrow

transplants and psychiatric disorders, respectively. The discrepancy may be caused by an effect from the diabetes family behavior assessment, or, for children with diabetes, the family may not significantly influence quality of life. More research in diverse populations is needed to determine if cohesion and quality of life have a relationship. From the paucity of research available, it is clear that more is needed on family functioning, family resilience, and quality of life.

### **Conclusion**

In the field of rehabilitation counseling, quality of life has progressed to a more psycho-social aspect of living with a disability. Quality of life has roots in both adjustment to disability theory and in health and physical functioning. Although quality of life focuses on all aspects of an individual's life, the family has rarely been studied as a factor. Specifically, there are two theories grounded in family systems, family resilience and the Circumplex Model of marital and family systems. Family resilience focuses on the family belief systems, family organizational patterns, and family communication/problem-solving in 'bouncing forward' after a stressor or adverse event. The Circumplex Model focuses on the change a family undergoes during and after a stressor or adverse event, focusing on family cohesion, flexibility, and communication.

There has been little research conducted on family functioning and resilience in relation to quality of life. From the little research available, one learns that family resilience is a predictor of quality of life; that parent-child relationships, social support, family conflict, and family type are variables that impact quality of life. There is a discrepancy on whether family cohesion is correlated with quality of life. Further

research is needed to resolve the discrepancy. The present study will provide more evidence in order to resolve the issue of family cohesion and quality of life. The next chapter will discuss the methods used by outlining the study. Included in the outline are a description of study participants, procedures, and assessments. An estimation of the analyses to be used will be given, followed by the results.

## **CHAPTER 3**

### **RESEARCH DESIGN AND METHODOLOGY**

#### **Statement of the Problem and Purpose of Study**

While quality of life has become an important outcome for rehabilitation counseling (Frain et al, 2008), there is little research on the impact of family dynamics, specifically cohesion, flexibility, and resilience, on an individual's quality of life. The family affects multiple aspects of an individual's life and therefore is a critical component of the rehabilitation process. Moreover, the "crucial determinant of the extent of rehabilitation" is the family's reaction to the disability (Versluys, 1980, p. 61). Understanding family dynamics and resilience is crucial to understanding an individual's quality of life. More information is needed in terms of quality of life and family dynamics and resilience in order to develop interventions and best practices for vocational rehabilitation counselors. The purpose of this study was to (a) examine the relationship between family functioning and quality of life, (b) examine the relationship between family resilience and quality of life, (c) examine the family functioning patterns of individuals with a disability, and (d) examine the family resilience of individuals with a disability.

#### **Research Questions**

RQ<sub>1</sub>: What is the relationship between family functioning and quality of life for an individual with a disability?

RQ<sub>2</sub>: What is the relationship between family resilience and quality of life for an individual with a disability?

### **Hypotheses**

Family functioning can be delineated into and measured through the two constructs of cohesion and flexibility (Olson & Gorall, 2003). Likewise, family resilience can be delineated into and measured through the three constructs of belief systems, family organizational patterns, and communication/problem-solving (Sixbey, 2005). The hypotheses for each research question are based on the constructs of family functioning and family resilience.

RQ<sub>1</sub>: What is the relationship between family functioning and quality of life for an individual with a disability?

- Hypothesis 1: Balanced family cohesion will have a positive relationship with quality of life.
- Null Hypothesis 1: There will be no relationship between balanced family cohesion and quality of life.
- Hypothesis 2: Balanced family flexibility will have a positive relationship with quality of life.
- Null Hypothesis 2: There will be no relationship between balanced family flexibility and quality of life.
- RQ<sub>2</sub>: What is the relationship between family resilience and quality of life for an individual with a disability?

- Hypothesis 1: Family belief systems will have a positive relationship with quality of life.
- Null Hypothesis 1: There will be no relationship between family belief systems and quality of life.
- Hypothesis 2: Family organizational patterns will have a positive relationship with quality of life.
- Null Hypothesis 2: There will be no relationship between family organizational patterns and quality of life.
- Hypothesis 3: Family communication/problem-solving will have a positive relationship with quality of life.
- Null Hypothesis 3: There will be no relationship between family communication/problem-solving and quality of life.

### **Population and Sample**

This study consisted of adults who have a disability and had utilized services provided by a state vocational rehabilitation agency. The only delimiting factor was the requirement that all participants must be capable of at least at an eighth grade reading level; this factor eliminates people with severe disabilities from the population being studied. Since family dynamics and quality of life has yet to be researched for people with disabilities, a broad population that included all types of disabilities was chosen. The questionnaire was originally sent to 600 state vocational rehabilitation clients, with 200 clients from three different states. Each state randomly selected 200 current clients; hence, in total, 600 surveys were sent out. The expected return rate of 20% was

approximately 120 usable questionnaires. Previous research with this group has resulted in a 20% return rate. However, approximately 60 surveys were returned, a return rate of 10%. This low return rate is most likely due to the somewhat transient nature of clients in the state vocational system. For example, almost 50 surveys were sent to old addresses. Clients were randomly selected by a computer and not all of the addresses on file were up current. The post office returned nearly 10% of the surveys. Therefore, a second mailing of 400 surveys were sent using the same three states and the same randomized selection process. Two of the three states received a total of 300 surveys, and one state received a total of 400 surveys. With the two mailings of surveys, 1,000 surveys in total were sent to current state vocational rehabilitation clients in three different states. Of those 1,000 surveys there was a return rate of 13.4% or 134 usable surveys.

### **Sample Size and Statistical Power**

Distributing 1,000 surveys allows for a 10% return rate which would obtain a sample size of 100. This exceeds the minimal sample size of 90, which was determined necessary to achieve the desired statistical power level (Cohen, Cohen, West, & Aiken, 2003). The sample size was obtained by calculating the alpha level (.05), the number of predictors (5), the effect size (.15), and power (.8) (Cohen, 2001). The alpha level is the amount of risk one is willing to take that the null hypothesis is correct (Cohen, 2001). The largest acceptable alpha level is .05 (Cohen, 2001). The alpha level for the current study has been set at .05. When using a .05 alpha level, one can reject the null hypothesis when the  $p$  value is less than .05. The number of predictors is determined by using the independent variables. The five independent variables for this study are family cohesion, flexibility, belief systems, organizational patterns, and communication/problem-solving.

Effect size is a “measure of the magnitude of a relationship” (Cohen et al, 2003). A medium effect size of .15 was used for the current study. Power is the likelihood of rejecting a null hypothesis (Cohen et al, 2003). A power of .5 is considered too low, meaning that there is only a 50% chance of attaining significant results (Cohen, 2001). A power of .95 is considered higher than necessary in behavioral sciences (Cohen, 2001). The general consensus is a power of .8 (Cohen, 2001). Therefore, a power of .8 was chosen for the current study. Although family functioning is being assessed, only the individual with a disability is completing the assessments. However, requesting one individual member of the family complete the assessments is consistent with prior research (Olson & Gorall, 2003, Sixbey, 2005).

### **Data Collection and Instruments**

The researcher assembled a questionnaire package that included demographic information, the Family Resilience Assessment Scale, the Domain Specific Clinical-Centrality Quality of Life Scale, the Family Adaptability and Cohesion Scale II, a letter of instruction, a letter from the state vocational rehabilitation agency, and a postage paid return envelope. The pre-stamped packet was given to the state vocational rehabilitation agency, which addressed and mailed them to the probable participants. After three weeks, a reminder postcard was addressed and sent to the participants. The reminder postcard included a thank you to individuals who have completed and sent in the assessment and a reminder to those who had not yet completed the assessments. The reminder postcard was sent as a second contact to the participants to increase response rate (Dillman, 2000). The packets and postcards were addressed and mailed by the state agency. The postage was

paid by Utah State University. The researcher did not have access to the participants' identifying information. In order to preserve the participants' anonymity, all surveys were returned directly to the researcher.

### **Demographic Information**

Included in the demographic sheet is information on the type and nature of the disability and personal information such as age, occupation, and gender. The demographic information sheet can be found in Appendix B.

### **Domain Specific Clinical-Centrality Quality of Life Scale (DSC-C)**

The DSC-C is based on Bishop's Disability Centrality Model (Bishop, 2005a). The DSC-C, developed by Bishop (2005b), focuses on 10 life domains that were identified through a review of the literature (Bishop et al, 2007). The 10 domains include physical health, mental health (e.g., emotional wellbeing, happiness, enjoyment), work or studies, leisure activities (e.g., sports or hobbies), financial situation, relationship with spouse (or partner), family relations, other social relations (e.g., friends, neighbors), autonomy/independence, and religious/spiritual expression (Bishop et al, 2007). The respondents are asked to answer the following four questions for the 10 domains on a 7-point Likert scale ranging from not very to very:

1. How important is this part of your life to your overall quality of life?
2. How satisfied are you with how this part of your life is going?
3. How much control do you have over changing this part of your life?
4. How much does your illness or disability and/or its treatment impact your ability to function in this area of your life as you would like to?

Internal consistency reliability for the DSC-C has been reported acceptable with an original Cronbach's alpha of .71 for the total, and ranging from .70 to .86 for the four components (Bishop, 2005b). Other studies have reported Cronbach's alpha for the total scale between .74-.82 (Bishop et al, 2007; Bishop, Frain, & Tschopp, 2008). Construct and concurrent validity has been supported through the relationships between domain scores and measurements of quality of life, disability, and psychosocial adaptation (Bishop, 2009). Table 1 shows the correlation between the domains and the various measurements. The reliability for this study was 0.955. The DSC-C does not provide a single, overall quality of life score. The DSC-C can be found in Appendix C.

Table 1  
*Validity Results for the DSC-C*

Domain	Measurement	Correlation Coefficient
Satisfaction	Ladder of Adjustment Profile	$r = .70, p = .001$
	Delighted-Terrible Scale	$r = .71, p = .001$
Control	Ladder of Adjustment Profile	$r = .60, p = .001$
	Delighted-Terrible Scale	$r = .66, p = .001; r = .69, p < .01$
	Reactions to Impairment and Disability Inventory	$r = .21, p < .01$
	Self-Rated 1 Question	$r = -.52, p < .01$
Impact	Ladder of Adjustment Profile	$r = -.48, p = .001$
	Delighted-Terrible Scale	$r = -.32, p = .001; r = -.38, p < .01$
	Reactions to Impairment and Disability Inventory	$r = -.29, p < .01$
	Self-Rated 1 Question	$r = .41, p < .01$
	Importance*Satisfaction	Delighted-Terrible Scale
Importance*Satisfaction	Reactions to Impairment and Disability Inventory	$r = .32, p < .01$
	Self-Rated 1 Question	$r = -.64, p < .01$

### **Family Resilience Assessment Scale (FRAS)**

The FRAS was developed by Sixbey (2005) to measure family resilience and was based on Walsh's Family Resilience Model (Sixbey, 2005). The FRAS measures

family resilience on six factors: family communication and problem-solving, utilizing social and economical resources, maintaining a positive outlook, family connectedness, family spirituality, and ability to make meaning of adversity (Sixbey, 2005). The FRAS consists of 54 statements such as, “every family has problems,” “we ask neighbors for help and assistance,” “we feel free to express our opinions,” and “we have faith in a supreme being.” The respondents are asked to rate their family based on a 4-point Likert scale, ranging from strongly agree, agree, disagree, and strongly disagree. Reliability for the FRAS is high, with a Cronbach’s alpha of .96 for the total scale (Sixbey, 2005). The FRAS has good validity as tested by the Family Assessment Device 2 (FAD-2) (subscales- Problem-solving and Communication) (Sixbey, 2005). However, when tested against the Personal Meaning Index (PMI) and the Family Assessment Device 1 (FAD-1) (subscale- Affective Responsiveness and Affective Involvement), the validity was medium to low, possibly indicating a difference in defining the different constructs between the various assessments (Sixbey, 2005). The validating instruments were chosen based on Walsh’s (1998) nine constructs of family resilience. After intense factor analysis and reliability testing, the chosen validating instruments were used to measure the six new factors from the FRAS. This change in constructs could be one possible explanation for the poor validation of the PMI and FAD-1. However, “the six factor FRAS can be concluded a valid and reliable measure of family resilience based on subscale reliability coefficients between  $\alpha = .96$  and  $\alpha = .70$  ... and individual item factor loading at .30 or higher” (Sixbey, 2005, p. 85). The FRAS had an internal reliability score of  $\alpha = .96$  (Sixbey, 2005). Since the FRAS is fairly new, more testing on validity and reliability is needed. Scores on the FRAS can range between 54 and 216; lower scores

indicate little resilience within the family, while higher scores indicate high levels of resilience in the family. For this study, scores on the FRAS ranged from 107-211, with a mean of 163 and a standard deviation of 22.51. The reliability was 0.839. The FRAS can be found in Appendix D.

### **Family Adaptability and Cohesion Scale II (FACES-II)**

The FACES-II was developed by Olson to measure adaptability and cohesion levels in families and couples. Since the development of the Circumplex Model and the correlating assessments (FACES and Clinical Rating Scale), more than 500 studies have been conducted (Olson & Gorall, 2003; Winek, 2010). The FACES-II is a 30 item self-report instrument used to measure family functioning on four dimensions: enmeshed, disengaged, chaotic, and rigid (Franklin et al, 2001). The scores on the FACES-II reflect a curvilinear relationship to healthy functioning. Therefore, families who score in either extreme range on both dimensions (cohesion and flexibility) tend to have more difficulty coping with stress and have more problems. Reliability for the FACES-II is acceptable at .78 for adaptability, .87 for cohesion, and a .90 for the total scale (Grey et al, 1998). Internal consistency reliability was high, ranging from .86-.91 for cohesion and .78-.80 for adaptability (Grenwald-Mayes, 2002; Youngblut, Brooten, & Menzies, 2006). According to Olson and Gorall (2003), the FACES scales have been found to be reliable and valid for both clinical and research use. Criterion validity was established by correlating FACES-II with the other validated instruments (Youngblut et al, 2006). Test-retest correlations were high, .83 for cohesion and .80 for adaptability (Grenwald-Mayes, 2002; Youngblut et al, 2006). Overall reliability for this study was 0.895. Reliability for

cohesion was 0.716 and adaptability was 0.855. The FACES-II assessment can be found in Appendix E.

### **Data Analyses**

To examine the relationships among the different variables, multiple linear regression analyses were used. Specifically, Pearson Product Moment Correlations were used to determine the strength and direction of the relationship between the different independent variables and the dependent variable. Then, a standard multiple regression was conducted to determine the prediction of the independent variables on the dependent variable. A discussion of each analysis is provided below, including assumptions and limitations.

#### **Pearson Product Moment Correlation**

A Pearson Product Moment Correlation is often used to assess the strength and direction of a linear relationship between two or more variables. There are two assumptions underlying the Pearson correlation. First, the variables are assumed to have a linear relationship. The second assumption is that each score on the variables for one case (or participant) are independent of the scores on the same variables for the other cases (Green & Salkind, 2008).

The Pearson correlation ( $r$ ) is an index of effect size. It ranges in value from -1 to +1. Low or high scores on one variable tend to correlate with low or high scores on another variable. For example, if  $r$  is positive, high scores on family resilience are associated with high scores on quality of life and low scores on resilience are associated with low scores on quality of life. If  $r$  is negative, high scores on family resilience are

associated with low scores on quality of life and low scores on family resilience are associated with high scores of quality of life. If  $r$  is zero, scores on family resilience tend to be equally associated with either high or low scores on quality of life. Typically, in behavioral sciences, correlation coefficients of .10, .30, and .50 represent small, medium, and large coefficients, respectively (Green & Salkind, 2008).

### **Multiple Regression**

Standard multiple regression consists of independent variables being entered into the equation simultaneously. Each independent variable is evaluated based on what it uniquely adds to the prediction of the dependent variable (Tabachnick & Fidell, 2001).  $R$  is a type of effect size index ranging between 0 and 1, with 0 meaning there is no relationship between the independent (predictor) variables and the dependent (criterion) variable, and 1 meaning that the independent variables perfectly predict the dependent variable (Green & Salkind, 2008).

Assumptions and limitations for standard regression are: a) normality, linearity, and homoscedasticity; b) lack of outliers; c) sufficient sample size; and d) no multicollinearity or singularity. The assumption of normality, linearity, and homoscedasticity states that the residuals, which are the differences between obtained and predicted dependent variable scores, are normally distributed around the predicted dependent variable scores; the relationship between residuals and the predicted dependent variable is linear; and the variance of the residuals for the predicted dependent variable is the same for all predicted scores (Tabachnick & Fidell, 2001). It is assumed there are no outliers in the cases that can skew the data or provide inaccurate outcomes. There will be an initial check for outliers before analysis begins. Outliers can either be deleted,

rescored, or the variable transformed (Tabachnick & Fidell, 2001). The third assumption of having a sufficient sample size refers to the ratio of cases to independent variables. If there are more independent variables than cases, the regression solution is perfect; this indicates a meaningless prediction of dependent variables for every case. It is important to find the right sample size in relation to the independent variables. Tabachnick and Fidell (2001) suggested using the formula,  $N \geq 50 + 8m$ , where  $m$  is equal to the number of independent variables. For example, with five independent variables,  $50 + 8(5) = 50 + 40 = 90$ . For five independent variables, a sample size of 90 is needed. Another way to find an adequate sample size is to use the sample size table determined by Cohen (2001) and Cohen (1988) that uses the effect size, statistical power level, alpha level, and number of predictors. This method was used to find the minimum sample size for the current study. Sample size is also affected by the reliability of the variables, the effect size, and the skewness of the dependent variable, if at all (Tabachnick & Fidell, 2001). The last assumption is the absence of multicollinearity or singularity. Multicollinearity and singularity do not allow for an inversion of the matrix of correlations, which is required to calculate regression coefficients. Multicollinearity happens when two independent variables are highly correlated with each other (.90 or higher) (Cohen et al, 2003). Singularity happens when two independent variables are perfectly correlated.

There are limitations to multiple regression analysis that are theoretically based. First, regression analyses do not imply causal relationships. Causal relationships are only addressed when one or more variables are manipulated, which causes change in another variable. Second, statistical analyses cannot determine which variables to use or when to use them; the researcher determines these. However, identifying the fewest independent

variables necessary to predict a dependent variable is a general goal of regression (Tabachnick & Fidell, 2001). The inclusion of independent variables is critical because independent variables must be reliable and not correlate too highly with other independent variables.

To help counteract the effects of theoretical limitations and assumptions, residuals were examined. By analyzing the residuals, the variables that are degrading to prediction, outliers, and that fail to comply with assumptions of normal distribution were identified (Tabachnick & Fidell, 2001). In addition, tests of multicollinearity were conducted.

## CHAPTER 4

### RESULTS

This chapter will outline the results of the study. Demographic information including gender, age, age of disability onset, race, marital status, family status, family members, level of education, current employment status, and type of disability will be discussed first. Then, two research questions will be answered by evaluating the results of correlation and regression analyses.

#### Demographic Information

One thousand surveys were sent to three different states. Idaho and Utah each received 300 surveys and Oklahoma received 400 surveys to send to State Vocational Rehabilitation clients, with a return rate 13.4 %. Of the 134 returned surveys, 46 (35%) came from Idaho, 43 (32%) came from Oklahoma, and 45 (34%) came from Utah. Fifty-six percent of the returned surveys were from females, 42% were from males, and three surveys were returned without gender information. The average age of participants was 37 and the average age of disability onset was 15 (Table 2).

Table 2  
*Frequency of the Participants' Age and Age of Disability Onset*

Statistics	Age	Age of Disability Onset
Mean	36.77	14.71
Median	39	6
Mode	20 and 52	1
Standard Deviation	15.32	17.36
Range	61	77
Minimum	17	1
Maximum	78	78

The participant population was primarily White (82%), followed by Hispanic (5%) and African Americans (5%); 4.5% were Native Americans and 1.5% were Asians or Pacific Islanders. Only one survey was returned without this information included. The lack of diversity in the population study may be accounted for by the smaller levels of diversity within some of the state vocational agencies used.

The majority of the participants were never married (33%). This is not surprising given that approximately 39% of the participants were younger than 30 years old. Twenty-two percent of the participants were divorced, 20% were married or living as married, 15% had never been married and were living alone. Only 5% identified themselves as separated and 5% as a widow or widower.

The participants were also asked to include information regarding their current family status, including their current living arrangements. Thirty-five percent of the participants were living with their parents; 18% were living as a single parent; 15% were married or living as married with children in the home; 14% were living with roommates or alone; 10% of the participants were married or living as married without children, and only 3% were living with a sibling. Of the 134 surveys returned, six surveys did not contain information on the participant's living arrangements.

Participants were asked to list the persons whom they considered as family. The information given was categorized into 15 different groups: wife (2%), son (4%), daughter (2%), child (no gender given) (3%), mother (8%), husband (4%), girlfriend (1%), boyfriend (1%), parents (8%), sibling(s) (2%), grandparent (1%), and multiple family and or friends (41%). While 8% of the participants listed solely their mother, none

listed solely their father. Of the 134 surveys returned, 35 (26%) were returned without this information included. Table 3 includes the frequencies and percentages.

Table 3  
*Frequencies of Family Members*

Family Member	Frequency	Percent
Wife	3	2.2
Son	5	3.7
Daughter	2	1.5
Child (gender unknown)	4	3
Mother	10	7.5
Husband	5	3.7
Girlfriend	1	.7
Boyfriend	1	.7
Parents	10	7.5
Sibling	2	1.5
Multiple Family Members	55	41
Grandparents	1	.7

The level of education completed by the participants included less than high school (22%), high school graduate (37%), some college (34%), college degree or certification (6%), and graduate degree (1%). Only one returned survey did not report education level.

Current employment status for the participants included unemployed and seeking work (45%), student (17%), retired (2%), employed part time (10%), homemaker (6%), permanent disability status (8%), and employed full time (10%). Three returned surveys were missing this information.

There were eight different types of disability reported in the survey: blind or visual impairments (2%), mental illness (13%), developmental disabilities (8%), learning disability (19%), mobility impairments (10%), substance abuse (3%), deaf or hearing

impairment (5%), and multiple disabilities (37%). Four returned surveys were missing this information.

Participants were asked about spending time, either online or face-to-face, with other people with disabilities. Forty percent of the participants did spend time with other people with disabilities, while 60% did not.

### **Research Questions and Hypothesis Analysis**

This section will discuss each of the two different research questions and the hypotheses associated with the question. The research questions and their hypotheses are included below:

RQ<sub>1</sub>: What is the relationship between family functioning and quality of life for an individual with a disability?

- Hypothesis 1: Balanced family cohesion will have a positive relationship with quality of life.
- Null Hypothesis 1: There will be no relationship between balanced family cohesion and quality of life.
- Hypothesis 2: Balanced family flexibility will have a positive relationship with quality of life.
- Null Hypothesis 2: There will be no relationship between balanced family flexibility and quality of life.

RQ<sub>2</sub>: What is the relationship between family resilience and quality of life for an individual with a disability?

- Hypothesis 1: Family belief systems will have a positive relationship with quality of life.
- Null Hypothesis 1: There will be no relationship between family belief systems and quality of life.
- Hypothesis 2: Family organizational patterns will have a positive relationship with quality of life.
- Null Hypothesis 2: There will be no relationship between family organizational patterns and quality of life.
- Hypothesis 3: Family communication/problem-solving will have a positive relationship with quality of life.
- Null Hypothesis 3: There will be no relationship between family communication/problem-solving and quality of life.

A multiple regression analysis was conducted to determine how family cohesion, adaptation, belief systems, organizational patterns, and communication/problem-solving predicted overall quality of life. Since family cohesion and adaptability are curvilinear, a data conversion was conducted. Originally, the scores on the FACES-II are placed on a scale of 1-8 for both cohesion and adaptability; 1 and 8 represent unbalanced families while 4 and 5 represent balanced families. While it is important to know if families are extreme in rigidity versus chaos or enmeshed versus disengaged, the focus of this study was on whether or not the family is balanced. Post hoc analyses were conducted on the family types and explained later in this chapter. The data for this study were converted to a continuum scale of balanced to unbalanced. The raw scores and the converted scores are located in Table 4.

Table 4  
*Raw Scores and Converted Scores on the FACES-II*

	Unbalance			Balance			Unbalance		
Raw Scale	1	2	3	4	5	6	7	8	
Converted Scale	4	3	2	1	1	2	3	4	

There was a statistically significant relationship between family functioning and family resilience with quality of life,  $F(5, 87) = 9.643, p < .001$ , therefore, the null hypotheses can be rejected. The sample multiple correlation coefficient was .597, indicating that 36% of the variance of quality of life can be accounted for by family functioning and family resilience. Quality of life is composed of ten life domains (Bishop, 2005b); physical health, mental health, relationship with significant other, family relationships, other social relationships, work/studies, leisure activities, finances, autonomy/independence, and religious/spiritual expression. Family dynamics is a small aspect of the relationship with significant other and family relationships domains, but accounts for 36% of the variance of quality of life. The other eight life domains could account for additional variance in quality of life. The regression coefficients for the five variables are .137 for belief systems, .108 for organizational patterns, .353 for communication/problem-solving, .014 for cohesion, and .160 for flexibility. None of these regression coefficients was statistically significant, likely due to the fact that these five variables are highly correlated. It would be difficult to change one of these variables without impacting the other variables. The coefficients can be found in Table 5. Table 5 also includes the bivariate and partial correlations. Of the five independent variables, none had a significant correlation between predictors. One possible reason for this is the high correlation between the five variables. Indeed, the correlation coefficients between the five variables range from .53 to .93.

Table 5  
*The Coefficients and Correlations of the Family Functioning and Resilience Predictors with Quality of Life*

Predictors	B	Sig.	Correlation between each predictor and quality of life	Correlation between each predictor and quality of life, controlling for all other predictors
Belief Systems	.137	.423	.537	.086
Organizational Patterns	.108	.512	.507	.070
Communication/ Problem-solving	.353	.078	.562	.188
Cohesion	.014	.879	.033	.016
Adaptation	.160	.084	.184	.184

There are several limitations to using standard multiple regression, especially if there are numerous independent variables. The likelihood of making a Type I error increases with many independent variables and with standard multiple regression, the independent variables are added into the equation at the same time, without testing each individually. The “unique contributions” of independent variables often depend on the other variables (Cohen, 2001). Therefore, care should be used when analyzing the results of the part and partial correlations. Another limitation is that multiple regression does not imply a causal relationship between the independent variables and the dependent variable. In order to determine causality, the independent variable must be manipulated. Another problem is multicollinearity, or in other words, measuring variables that are too highly correlated with each other. The results from the standard multiple regression analyses used in this study suggest the five independent variables are too highly correlated to adequately predict quality of life. Therefore, tests of multicollinearity were conducted. The five independent variables for the study are family belief systems, organizational patterns, communication/problem-solving, cohesion, and flexibility. Typically, a variance inflation factor (VIF) of 10 or higher indicates multicollinearity

(Cohen et al, 2003). Communication/problem-solving approached this level of 10 with a VIF of 7.67. Also, tolerance levels of .10 or lower typically indicate multicollinearity (Cohen et al, 2003). Communication/Problem-solving approached this level with a tolerance of .13. The five variables do not indicate multicollinearity; they can be used to predict quality of life. The results are in Table 6.

Table 6

*Multicollinearity Results*

Independent Variables	Tolerance	VIF
Belief Systems	.26	3.91
Organizational Patterns	.27	3.68
Communication/Problem-solving	.13	7.67
Cohesion	.29	3.45
Adaptation	.30	3.34

A Pearson product moment correlation was conducted in order to assess the magnitude and direction of the relationships between the five independent variables and quality of life. The total FRAS score was also included in the correlation analysis. The five independent variables and the FRAS total score each had a positive significant relationship with quality of life greater than or equal to .375. The correlation coefficients can be found in Table 7.

According to the Circumplex Model, there are 16 different types of families, ranging from very connected to very separate, and very flexible to very rigid. Within these 16 different types, families can be balanced, semi-balanced, or unbalanced. Unbalanced family types fall into extreme conditions of very connected, very separate, very flexible, or very rigid.

Table 7  
*Correlation Coefficients for Independent Variables and Quality of Life (N =99)*

	Quality of Life	Flexibility	Cohesion	FRAS Total	Com/ P S	Org Patterns
Belief Systems	.412**	.623**	.532**	.877**	.890**	.826**
Organizational Patterns	.374**	.578**	.541**	.910**	.866**	
Communication/ Problem Solving	.460**	.723**	.717**	.930**		
FRAS Total	.418**	.658**	.620**			
Cohesion	.463**	.817**				
Flexibility	.496**					

\*\*Correlation is significant at the .0025 level.

Of the 16 family types, four family types fall into the category of unbalanced family type: very connected-very flexible, very connected-rigid, disengaged-very flexible, and disengaged-rigid. Semi-balanced families may be extreme in one area, but balanced in another. For example, a family may be very connected but flexible. Eight family types can be considered as semi-balanced: very connected-flexible, very connected-structured, connected-very flexible, connected-rigid, separated-very flexible, separated-rigid, disengaged-flexible, and disengaged-structured. Balanced families are not extreme in any condition. Four family types can be categorized as balanced: connected-flexible, connected-structured, separated-flexible, and separated-structured.

Forty-two (31.3%) of the participants had families that scored within the balanced range on the FACES assessment. Forty-five (33.3%) scored in the semi-balanced range, and 38 (28.1%) scored in the unbalanced range. Connected-flexible (balanced) accounted for 10.4% of the participants' families; 8.9% of the families were separate-flexible (balanced); 8.1% were separate-structured (balanced); 15.6% were disengaged-rigid (unbalanced); and 12.6% were very connected-very flexible (unbalanced). Connected-

very flexible (semi-balanced) accounted for 18.5%. The participants' families were fairly equally divided between balanced, semi-balanced, and unbalanced family types.

However, the 16 family types were not equally divided, with nearly 38 of the 39 unbalanced families being either disengaged-rigid or very connected-very flexible. In addition, more than half of the semi-balanced families were connected-very flexible. Of the balanced families, the groups were approximately equal, except only 5 of the 42 were connected-structured. The frequency of family types can be found in Table 8.

A Pearson product moment correlation was used to evaluate the relationship between family cohesion and family flexibility, with the 10 life domains assessed with the DSC-C. These results can be found in Table 9. There are significant correlations between family cohesion and importance in mental health, work or studies, relationship with significant other, family relations, and social relations. Significant correlations were found between family cohesion and satisfaction in physical health, mental health, leisure activities, financial situation, relationship with significant other, family relations, independence, and religion. Between control and family cohesion, significant correlations were found in physical health, leisure activities, financial situation, relationship with significant other, family relations, social relations, independence, and religion. In terms of disability impact and family cohesion, significant correlations were found on leisure activities, financial situation, and family relations.

There were significant correlations found between family adaptation and importance on mental health, work or studies, financial situation, relationship with significant other, family relations, and social relations.

Table 8  
*Frequencies of Family Types*

Family Type	Frequency	Percent
Balanced		
Connected-Flexible	14	10.4
Connected-Structured	5	3.7
Separated-Flexible	12	8.9
Separated-Structured	11	8.1
Semi-Balanced		
Very Connected-Flexible	4	3.0
Very Connected-Structured	1	.7
Connected-Very Flexible	25	18.5
Connected-Rigid	0	0
Separated-Very Flexible	0	0
Separated-Rigid	5	3.7
Disengaged-Flexible	4	3.0
Disengaged-Structured	5	3.7
Unbalanced		
Very Connected-Very Flexible	17	12.6
Very Connected-Rigid	0	0
Disengaged-Very Flexible	1	.7
Disengaged-Rigid	21	15.6

There were significant correlations between family adaptation and satisfaction in nine life domains. The single domain that did not show a significant correlation was social relations. In terms of control, all 10 life domains had significant correlations. Leisure activities and family relations were the only domains that had significant correlations with family adaptation and disability impact.

Table 9  
*Correlation Coefficients Between 10 Life Domains and Family Cohesion and Adaptability*

Life Domain	Cohesion	Adaptation
Physical Health		
Importance	.067	.153
Satisfaction	.241**	.332**
Control	.225*	.334**
Impact	.13	.1
Mental Health		
Importance	.340**	.311**

(table continues)

Satisfaction	.308**	.364**
Control	.232	.322**
Impact	.087	.069
<hr/>		
Work/Studies		
Importance	.218*	.201*
Satisfaction	.16	.293**
Control	.116	.260**
Impact	.142	.104
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Leisure		
Importance	.148	.153
Satisfaction	.296**	.297**
Control	.283**	.311**
Impact	.202*	.146
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Financial		
Importance	.1	.201*
Satisfaction	.269**	.297**
Control	.283**	.311**
Impact	.202*	.146
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Relationship with Significant other		
Importance	.463**	.465**
Satisfaction	.478**	.493**
Control	.422**	.465**
Impact	.052	.099
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Family Relations		
Importance	.332**	.337**
Satisfaction	.489**	.550**
Control	.427**	.499**
Impact	.11	.188*
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Social Relations		
Importance	.146	.200*
Satisfaction	-.114	-.031
Control	.237**	.333**
Impact	-.032	.059
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Life Domain		
Autonomy/Independence		Cohesion
Importance	.067	.124
Satisfaction	.186*	.271**
Control	.228*	.360**
Impact	.114	.126
<hr/>		
Religion		
Importance	-.28	-.038
Satisfaction	.291**	.301**
Control	.281**	.296**
Impact	-.096	-.011

\*\*Correlation is Significant at the 0.01 level (2-tailed).

\*Correlation is Significant at the 0.05 level (2-tailed).

Post hoc analyses were also conducted on the correlations between family resilience and quality of life. Scores on the FRAS ranged from 107-211, with a standard deviation of 22.51. The mean for this study was 163, with a mode of 161. The scores on the FRAS ranged from 54-218. The majority of the participants in this study scored fairly high on the FRAS.

Pearson product moment correlations were also conducted to evaluate the relationship between the three family resilience constructs and the 10 life domains assessed on the DSC-C. These results are discussed below and can be found in Table 10.

Belief systems significantly correlated with the degree of satisfaction of individuals with disabilities in terms of their physical health, mental health, work or studies, leisure activities, family relations, and religion. There were significant correlations between belief systems and the importance of mental health, family relations, and social relations. In terms of control and belief systems, there were significant correlations between belief systems and physical health, mental health, work or studies, leisure, family relations, social relations, independence, and religion. There were no significant correlations between belief systems and the impact of a disability on the different life domains.

There were significant correlations between organizational patterns and the importance of mental health, work or studies, family relationships, and social relationships. Significant correlations were found between organizational patterns and satisfaction in physical health, mental health, work or studies, leisure activities, financial situation, relationship with significant other, family relationships, independence/autonomy, and religion. In terms of control, there were significant

correlations between organizational patterns and physical health, mental health, work or studies, leisure activities, financial situation, relationship with significant other, family relations, social relations, independence/autonomy, and religion. There were no significant correlations between organizational patterns and impact of the disability on any of the 10 life domains.

There are significant correlations between communication/problem-solving and the importance of mental health, leisure activities, family relationships, and social relationships. In terms of satisfaction, there are significant correlations between communication/problem-solving in physical health, mental health, work or studies, leisure activities, financial situation, relationship with significant other, family relationships, independence/autonomy, and religion. There are significant correlations between communication/problem-solving and control in physical health, mental health, work or studies, leisure activities, financial situation, relationship with significant other, family relationships, social relationships, independence/autonomy, and religion. There were no significant correlations between communication/problem-solving and the impact of the disability on any of the 10 life domains.

Table 10  
*Correlations Between 10 Life Domains and Family Resilience*

Life Domain	Belief Systems	Organizational Patterns	Communication/Problem-solving	FRAS Total
Physical Health				
Importance	.14	.067	.0184	.143
Satisfaction	.292**	.311**	.372**	.351**
Control	.249*	.300**	.351**	.326**
Impact	.002	.002	.083	.029

(table continues)

Mental Health				
Importance	.215*	.237*	.227*	.246**
Satisfaction	.322**	.403**	.385**	.390**
Control	.347**	.381	.368**	.390**
Impact	.018	-.069	.053	.018
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Work/Studies				
Importance	.161	.051	.137	.127
Satisfaction	.243*	.204*	.258*	.239*
Control	.234*	.151	.245*	.224*
Impact	.063	.062	.13	.116
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Financial				
Importance	.088	.079	.097	.082
Satisfaction	.147	.109	.257*	.246*
Control	.095	.126	.229*	.176
Impact	.015	.089	.09	.08
<hr/>				
Relationship with Significant Other				
Importance	.079	.057	.169	.108
Satisfaction	.109	.254*	.270*	.218
Control	.126	.23	.259*	.169
Impact	.089	.144	.135	.155
<hr/>				
Family Relations				
Importance	.268**	.267**	.401**	.339**
Satisfaction	.414**	.429**	.554**	.476**
Control	.374**	.394**	.555**	.467**
Impact	.077	.052	.127	.089
<hr/>				
Social Relation				
Importance	.287**	.137**	.322**	.355**
Satisfaction	.042	.025	-.039	.007
Control	.256*	.377**	.373**	.385**
Impact	.119	.174	.127	.176
<hr/>				
Autonomy/Independence				
Importance	.212	.088	.113	.102
Satisfaction	.124	.242*	.224*	.219*
Control	.226*	.239*	.325**	.284*
Impact	.002	-.044	.001	-.017
<hr/>				
Religion				
Importance	.126	.225*	.156	.264**
Satisfaction	.361**	.472**	.400**	.473**
Control	.343**	.379**	.354**	.410**
Impact	.047	.065	.078	.094

\*\*Correlation is Significant at the 0.01 level (2-tailed).

\*Correlation is Significant at the 0.05 level (2-tailed).

## Summary

The first research question sought to determine the relationship is between family functioning and quality of life, finding a statistically significant relationship between quality of life and both family cohesion and flexibility. Specifically, if the family was balanced in either cohesion or flexibility, the greater the quality of life the family member with a disability. Although communication was not specifically assessed, it is considered the catalyst for a balanced family. Therefore, one cannot assume a relationship between communication and quality of life from this study. However, there is a strong argument for the high probability of this relationship, given the relationship between communication and cohesion and flexibility.

The second research questioned concerned the relationship between family resilience and quality of life. Family resilience and quality of life were found to have a statistically significant relationship. The more resilient a family is, the better the quality of life for an individual with a disability. Each of the three constructs of family resilience (belief systems, organizational patterns, and communication/problem-solving) had statistically significant relationships with quality of life.

Both family resilience and family functioning significantly correlated with most of the following four areas: importance, satisfaction, control, and impact on the 10 life domains of physical health, mental health, work/studies, leisure, financial, relationship with significant other, family relations, social relations, autonomy/independence, and religion/spirituality.

## CHAPTER 5

### CONCLUSIONS

While quality of life has become an important outcome for rehabilitation counseling (Frain et al, 2008), there is little research on the impact of family dynamics, specifically cohesion, flexibility, and resilience, on an individual's quality of life. The family affects multiple aspects of an individual's life and therefore is a critical component of the rehabilitation process. Moreover, the "crucial determinant of the extent of rehabilitation" is the family's reaction to the disability (Versluys, 1980, p. 61). Understanding family dynamics and resilience is crucial to understanding an individual's quality of life. The purpose of this study was to (a) examine the relationship between family functioning and quality of life, (b) examine the relationship between family resilience and quality of life, (c) examine the family functioning patterns for individuals with a disability, and (d) examine family resilience for individuals with a disability.

Surveys were sent to 1000 rehabilitation clients in three different states to assess their quality of life, family resilience, and family functioning. Of the 1000 surveys sent, 134 were returned and used. In order to obtain adequate power for the study, 90 returned surveys were needed. The majority of the respondents were Caucasian, between the ages of 17-33, and living with parents. Many of the respondents had a high school education, but little or no post-secondary education, and were unemployed and looking for work. More than half of the respondents had multiple disabilities.

Correlation and regression analyses were completed, finding a statistically significant relationship between both family functioning and family resilience with quality of life. As the resilience within the family improves, the quality of life improves.

Scores on the FRAS ranged from 107-211, with a standard deviation of 22.51. The mean for this study was 163, with a mode of 161. The majority of the participants in this study scored fairly high on the FRAS in comparison to other studies. One possible reason for this study's high scores on the FRAS, may be the fact that all participants of this study were clients of state vocational rehabilitation agencies, and utilization of community resources is a characteristic of resilience.

Family functioning had a statistically significant relationship with quality of life. Family functioning that was more balanced was associated with higher levels of quality of life. Forty-two (31.3%) of the participants had families who scored within the balanced range on the FACES-II assessment, 45 (33.3%) scored in the semi-balanced range, and 38 (28.1%) scored in the unbalanced range.

### **Limitations**

The purpose of this study was to examine the relationships between quality of life and family dynamics, such as family functioning and resilience, for people with disabilities who are clients of a state vocational agency. Three state vocational agencies were included in this study; this limits the generalizability of the results to clients in the other 47 states. The participating state agencies were Utah, Idaho, and Oklahoma and due to the unique family dynamics of the three states, the results could possibly be skewed. The three states have specific characteristics such as high rates of Christianity for all three states, and agriculture for Oklahoma, both of which are associated with a culture that emphasizes on the family. Family farms tend to have families that work together in agriculture, thus increasing communication and cohesion. The religious aspects in the

three states also typically emphasize the importance of the family. These characteristics may have influenced the results of the assessments. Studying a nationwide population, both family resilience and family functioning may be different. There is the possibility that some of the extreme family types in cohesion and rigidity are due to the population characteristics of the three states used in this present study. The study population was fairly homogenous (mostly Caucasian [82%] and between the ages of 17 and 34), and therefore cannot be generalized to other ethnicities or ages.

The participants were all clients of a state vocational rehabilitation agency when they completed the survey, indicating that the participants were accessing, at minimum, one community resource. Utilizing community resources is a characteristic of resilient families. Therefore, it is possible that rehabilitation clients have families with higher resilience than individuals with disabilities who do not access a community resource.

One aspect of family functioning, communication, could have been assessed. According to the family Circumplex Model, communication is the catalyst for change within a family and thought to be the core of balance within a family. If a family has good communication, then the family is likely to be balanced. However, the FACES-II assessment does not measure family communication. Including an assessment on family communication could provide more accurate information on how family communication affects family functioning and quality of life.

Another limitation of this study was the small response rate, which was only 13.4%. Previous research with state vocational agencies has yielded a return rate of around 20%. Although the study had a response rate of only 13.4%, an examination of the data reduces the concern of a response bias being present in the sample. Specifically,

the distribution of family types is fairly even, and post hoc analyses of the correlations between the ten life domains and family dynamics show significant relationships.

Dillman (2000) laid out five elements needed to achieve high rates of return for mail surveys. The first is to have a respondent friendly questionnaire. The assessments used in this study were developed by previous researchers and were not modified, however, the demographic sheet included was developed for this study and followed the general rules of clear and simple wording with specific questions (Dillman, 2000). All of the assessments in this study were written at approximately an eighth grade reading level. Second, multiple contacts are necessary. Although the best practice is four contacts (Dillman, 2000), due to budget constraints, only two were made for this study. For this study two contacts were used, the initial assessment and a reminder/thank you postcard. The budget did not allow for the postage needed to send out four separate contacts that include a preliminary letter, two assessments, and a reminder/thank you. The third element is the inclusion of a return envelope with a postage stamp (Dillman, 2000). This requirement was met in this study. The fourth element is personalization of correspondence (Dillman, 2000). However, in order to maintain anonymity personalized information was not included in this study. The last element needed to increase return rate is to include the provision of a token prepaid financial incentive, such as a crisp one dollar bill (Dillman, 2000). Budget restraints restricted the use of financial incentives. This study may have received a higher return rate had all five elements been met.

### **Implications for Practice**

While it is important to know that family is a crucial aspect in the quality of life for individuals with a disability, it is equally important to put this knowledge into action. A possible lack of education and training for counselors has been cited as a reason why vocational rehabilitation counselors are not working with families of clients (Accordino, 1999). May and Hunt (1994) found that only four of 38 Council of Rehabilitation Education (CORE) accredited programs studied included an entire course on family systems theory; more than half of the programs did not offer a partial course on family systems theory. Only 11 of the 38 programs offered an introductory course on family counseling and 12 programs included family counseling as part of another course. The majority of programs did not offer advanced or specialized education in family counseling. Family functioning and resilience are important aspects of the quality of life for individuals with disabilities who are clients of a state vocational agency. However, it appears that family involvement is not being addressed in the practice or in the education of counselors. Rehabilitation counseling education programs can include specializations in family counseling, courses on family communication, systems and counseling techniques, and require a portion of the practicum and/or internship to be in family counseling. Educating incoming counselors on the theory and techniques of working with families can provide the knowledge base necessary for counselors to at least understand family dynamics and be able to determine the way in which the family is impacting the life of the client.

It appears that state vocational agencies rarely involve families in the rehabilitation process. Power et al, (1991) completed a study of multiple agency

administrators working in state vocational rehabilitation, sheltered workshops, and supported employment. The administrators provided reasons why counselors were not working with families, including large caseloads for counselors, time constraints, counselors' lack of training in working with families, agency regulations discouraging family contact, and supervisors discouraging contact with families. There appears to be a consistent lack of in-service training on theories and methods of working with families, a lack of discussion about working with families, and a lack of policies on how to work with and involve families in rehabilitation. State vocational rehabilitation agencies can provide in-service trainings on family communication, systems, and counseling for current counselors. Other possible ways for state vocational rehabilitation agencies to incorporate families in the rehabilitation process is to include at least one family session or provide at least one counseling session on how to improve communication within the client's family. Working with the client on how to improve communication can be done with or without family involvement.

Being able to meet with the family once or twice during the rehabilitation process may help improve job retention, medication use, therapeutic alliance, and the quality of life for the rehabilitation client. For families who are semi-balanced, little intervention would be required to promote change within the family system. However, if families are unbalanced, more in-depth family counseling may be necessary and a referral to a licensed marriage and family therapist may be beneficial.

## Future Research

The field of rehabilitation has only initiated empirical research on the significance of family and the way in which family dynamics impacts state vocational rehabilitation clients and people with disabilities, in general. The research conducted in this study can provide a starting point for future research; specifically, focusing more in depth on the relationships between the ten life domains and family functioning and resilience. For example, work/studies had strong significant relationships with all five variables across three dimensions of importance, satisfaction, and control. The family has an important role in the quality of life for an individual in terms of his/her work or education. The family typically provides the support for the individual, possibly transportation for work or school, and may be responsible for all, or part, of the financial responsibility of post-secondary education. On the other hand, the impact of disability had very few significant relationships across all ten life domains and all five variables. There are multiple reasons to explain the significant relationships and relationships that are not significant between the ten life domains and five variables. For example, one's financial situation had few statistically significant relationships between importance, satisfaction, control, and disability impact and the family resilience variables. Possible reasons for this is because the participants in this study were younger, living with parents, and were female, so the financial responsibilities may be fewer than those of an older population living on their own, or who are the family breadwinners. It would be extremely beneficial to conduct further research in this area.

One possible area of further research in family resilience is the divorce rate and the strength of family resilience. The divorce rate for this study population was 22.4%;

20% were married or were living as married, and 47% were never married. Of interest is the relationship between family resilience and the different family types of nuclear family, blended family, and single parent, impact family resilience. In addition, given the high rate of study participants who were never married, it may be helpful to delve further into the relationship types of individuals with disabilities and how the specific disabilities impact relationships.

There are many differences between the different disability types; this study included all disabilities due to the small sample size. However, future research may investigate the relationship between different types of disabilities and quality of life, family functioning, and family resilience. Indeed, future research may show that family types and family resilience can be predicted by disability type.

Another area of interest is the relationship between family type and family resilience and the variables of job placement, retention, and satisfaction. It is known that resilience includes utilization of community resources and employment; therefore rehabilitation counseling should investigate the ways in which family resilience and family functioning are correlated with job placement, satisfaction, and retention. If there is a strong correlation, state vocational rehabilitation agencies could provide support to families to increase resilience and family balance.

Another area of research that to further explored is the way in which religion, ethnicity, and socio-economic status (SES) affect family resilience or family functioning. Some ethnicities or religions tend be more family oriented and often include extended family, while other ethnicities and religions are more focused on the individual. Likewise, SES can influence the type of community resources used and the family

structure (i.e., the feminization of poverty, in which many families below the poverty line are single mother families).

The final area of future research concerns the most effective methods of educating and training vocational rehabilitation counselors in family counseling and how to work best with families in the vocational rehabilitation process. In-service training may be more beneficial than educational programs because individual offices can tailor the training to the specific family dynamics of their area. In addition, families in some areas may be more inclined to participate in the rehabilitation process than other families. For example, Native American populations generally work as a tribe, while other populations tend to work as individuals.

Only a limited number of research studies has been conducted in the area of family and people with disabilities and there remains much to be investigated. Family resilience, family functioning, quality of life and their impact on people with disabilities, presents a new and promising area of study and research.

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## APPENDICES

Appendix A  
Information Letter to Participants

**Introduction/ Purpose** Professor Jared Schultz and graduate student Kristi Openshaw in the Department of Special Education and Rehabilitation at Utah State University are conducting a research study to find out more about the relationship between family and life satisfaction. You have been asked to take part because you are a client of vocational rehabilitation. There will be approximately 300 total participants in this research study from multiple states.

**Procedures** If you agree to be in this research study, the following will happen to you. You will be asked to complete three surveys and demographic information. There are two surveys on your family and one on satisfaction in different life areas. The packet will take about 20-30 minutes to complete. Once you have finished the packet, please put the three surveys and the demographic sheet in the enclosed self-addressed stamped envelope and mail.

**New Findings** During the course of this research study, you will be informed of any significant new findings (either good or bad), such as changes in the risks or benefits resulting from participation in the research. If new information is obtained that is relevant or useful to you, or if the procedures and/or methods change at any time throughout this study, your consent to continue participating in this study will be obtained again.

**Risks** There are no anticipated risks for participation in this study.

**Benefits** There may or may not be any direct benefit to you from these procedures. The investigator, however, may learn more about the needs of people with disabilities and their families which will be used to develop techniques to improve family functioning, the rehabilitation system, and job placement for people with disabilities.

**Explanation & offer to answer questions** Dr. Schultz and Kristi Openshaw has explained this research study to you and answered your questions. If you have other questions or research-related problems, you may reach Kristi at 797-3403 or

**Payment/Compensation** There is no cost to you for participating in the study.

**Voluntary nature of participation and right to withdraw without consequence**

Participation in research is entirely voluntary. You may refuse to participate or withdraw at any time without consequence.

**Confidentiality** Research records will be kept confidential, consistent with federal and state regulations. Only the investigator and Kristi Openshaw will have access to the data which will be kept in a locked file cabinet in a locked room. The survey has been mailed to you by your state's vocational rehabilitation agency. The researchers do not have access to your information. The surveys are being returned directly to the researchers, the agency does not have access to who participated in this study.

**IRB Approval Statement** The Institutional Review Board (IRB) for the protection of human participants at USU has reviewed and approved this research study. If you have any pertinent questions or concerns about your rights or think the research may have harmed you, you may contact the IRB Administrator at (435) 797-0567 or email [irb@usu.edu](mailto:irb@usu.edu). If you have a concern or complaint about the research and you would like to contact someone other than the research team, you may contact the IRB Administrator to obtain information or to offer input.

**Investigator Statement** “I certify that the research study has been explained to the individual, by me or my research staff, and that the individual understands the nature and purpose, the possible risks and benefits associated with taking part in this research study. Any questions that have been raised have been answered.”

**Signature of PI & student or Co-PI**

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Principal Investigator  
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Appendix B  
Demographic Information Sheet

## Demographic Information

Please provide the following information about yourself:

Your age: \_\_\_\_\_ years                      Your gender: \_\_\_\_\_ male      \_\_\_\_\_ female

What is your race or ethnic identity:

_____ White (Non-Hispanic)	_____ Native American
_____ African American	_____ Asian or Pacific Islander
_____ Hispanic	_____ Other: _____

What is your marital status:

_____ Married or living as married	_____ Divorced
_____ Separated	_____ Never married living on your own
_____ Widow or Widower	_____ Never married living with parents

What is your family status:

_____ Married or living as with children	_____ Living with roommates
_____ Married or living as without children	_____ Living with a sibling
_____ Single Parent	_____ Living with parents

Please list which members of your family you will be thinking of when completing the assessments (such as: spouse, son, girlfriend, partner, mother, uncle, roommate, friend, step-daughter, etc.)

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What is your highest level of education:

_____ Less than high school	_____ College graduate
_____ High school graduate or equivalent	_____ Masters degree or higher
_____ Some college or technical school	

What is your current employment:

_____ Employed full-time	_____ Employed part-time
_____ Unemployed-seeking work	_____ Homemaker
_____ Student	_____ Permanent disability
_____ Retired	

Type of Disability-mark all that apply

_____ Physical-deaf, hearing impaired	_____ Learning Disability
_____ Physical-blind, visually impaired	_____ Physical-mobility
_____ Mental Illness (depression, schizophrenia)	_____ Substance Abuse
_____ Developmental (autism, Down syndrome)	

Age of disability onset: \_\_\_\_\_ birth                      \_\_\_\_\_ years old

Do you spend time with other people with disabilities either in person or online? \_\_\_ yes    \_\_\_ no

If yes, are you part of an organized group? If yes which group? \_\_\_\_\_

Do you meet with other people with disabilities through online sources such as facebook, myspace, twitter, etc? If yes, which one? \_\_\_\_\_

Appendix C  
Disability Centrality Scale

## DSC-C-C Quality of Life Questionnaire

## ABOUT THIS QUESTIONNAIRE

These questions ask about you, your disability or condition, and its treatment.

Please think carefully about each question. They can be answered simply by checking the line or circling the number next to the answer which best applies to you.

If you are unsure how to answer any question, please give the best answer you can and write in any comments you want to make.

## Your Quality of Life:

Check the box which best describes how you feel about YOUR LIFE AS A WHOLE—

- \_\_\_\_\_ = Terrible  
 \_\_\_\_\_ = Unhappy  
 \_\_\_\_\_ = Mostly dissatisfied  
 \_\_\_\_\_ = Mixed – about equally satisfied and dissatisfied  
 \_\_\_\_\_ = Mostly satisfied  
 \_\_\_\_\_ = Pleased  
 \_\_\_\_\_ = Delighted.

Finally, in this section we ask you to think about a number of different areas of your life, including you physical health, emotional health, you relationships with family and friends, your work, and so on. For each of the 10 parts of your life on the next few pages, please answer the following questions **by circling the number** that is right for you about:

1. **Importance:** How important is this part of your life in contributing to your **overall quality of life?**
2. **Satisfaction:** How satisfied are you with how this part of your life is going?
3. **Control:** How much control do you have over this part of your life? In other words: **How much do you feel like you could change things in this part of your life if you wanted to?**
4. **Interference:** How much does your disability and/or its treatment interfere with your ability to function in this area of your life as you would like to?

1. Your Physical Health								
IMPORTANCE								
Not Very Important	1	2	3	4	5	6	7	Very Important
SATISFACTION								
Not Very Satisfied	1	2	3	4	5	6	7	Very Satisfied
CONTROL								
Not Very Much	1	2	3	4	5	6	7	Very Much
INTERFERENCE								
Not Very Much	1	2	3	4	5	6	7	Very Much

2. Your Mental Health (e.g., Emotional well-being, happiness, enjoyment of life)								
IMPORTANCE								
Not Very Important	1	2	3	4	5	6	7	Very Important
SATISFACTION								
Not Very Satisfied	1	2	3	4	5	6	7	Very Satisfied
CONTROL								
Not Very Much	1	2	3	4	5	6	7	Very Much
INTERFERENCE								
Not Very Much	1	2	3	4	5	6	7	Very Much

3. Your Work (or Studies)								
IMPORTANCE								
Not Very Important	1	2	3	4	5	6	7	Very Important
SATISFACTION								
Not Very Satisfied	1	2	3	4	5	6	7	Very Satisfied
CONTROL								
Not Very Much	1	2	3	4	5	6	7	Very Much
INTERFERENCE								
Not Very Much	1	2	3	4	5	6	7	Very Much

4. Your Leisure Activities (e.g., sports, hobbies, things you do to relax or have fun)								
IMPORTANCE								
Not Very Important	1	2	3	4	5	6	7	Very Important
SATISFACTION								
Not Very Satisfied	1	2	3	4	5	6	7	Very Satisfied
CONTROL								
Not Very Much	1	2	3	4	5	6	7	Very Much
INTERFERENCE								
Not Very Much	1	2	3	4	5	6	7	Very Much

5. Your Financial Situation								
IMPORTANCE								
Not Very Important	1	2	3	4	5	6	7	Very Important
SATISFACTION								
Not Very Satisfied	1	2	3	4	5	6	7	Very Satisfied
CONTROL								
Not Very Much	1	2	3	4	5	6	7	Very Much
INTERFERENCE								
Not Very Much	1	2	3	4	5	6	7	Very Much

6. Relationship with your spouse (or partner if not married)								
IMPORTANCE								
Not Very Important	1	2	3	4	5	6	7	Very Important
SATISFACTION								
Not Very Satisfied	1	2	3	4	5	6	7	Very Satisfied
CONTROL								
Not Very Much	1	2	3	4	5	6	7	Very Much
INTERFERENCE								
Not Very Much	1	2	3	4	5	6	7	Very Much

7. Family Relations								
IMPORTANCE								
Not Very Important	1	2	3	4	5	6	7	Very Important
SATISFACTION								
Not Very Satisfied	1	2	3	4	5	6	7	Very Satisfied
CONTROL								
Not Very Much	1	2	3	4	5	6	7	Very Much
INTERFERENCE								
Not Very Much	1	2	3	4	5	6	7	Very Much

8. Other Social Relations (e.g., friends, people who offer you support)								
IMPORTANCE								
Not Very Important	1	2	3	4	5	6	7	Very Important
SATISFACTION								
Not Very Satisfied	1	2	3	4	5	6	7	Very Satisfied
CONTROL								
Not Very Much	1	2	3	4	5	6	7	Very Much
INTERFERENCE								
Not Very Much	1	2	3	4	5	6	7	Very Much

9. Autonomy/Independence (e.g., the ability to do things you want, independence, freedom)								
IMPORTANCE								
Not Very Important	1	2	3	4	5	6	7	Very Important
SATISFACTION								
Not Very Satisfied	1	2	3	4	5	6	7	Very Satisfied
CONTROL								
Not Very Much	1	2	3	4	5	6	7	Very Much
INTERFERENCE								
Not Very Much	1	2	3	4	5	6	7	Very Much

10. Religious/Spiritual Expression (e.g., Spiritual health, church life, relationship with higher being)								
IMPORTANCE								
Not Very Important	1	2	3	4	5	6	7	Very Important
SATISFACTION								
Not Very Satisfied	1	2	3	4	5	6	7	Very Satisfied
CONTROL								
Not Very Much	1	2	3	4	5	6	7	Very Much
INTERFERENCE								
Not Very Much	1	2	3	4	5	6	7	Very Much

Are there any other areas that are important to your quality of life that were not mentioned?

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Appendix D  
Family Resilience Assessment Scale

### Family Resilience Assessment Scale

Please read each statement carefully. Decide how well you believe it describes your family now from your viewpoint. Your family may include any individuals you wish.

	Strongly Agree	Agree	Disagree	Strongly Disagree
1. Our family structure is flexible to deal with the unexpected.				
2. Our friends value us and who we are.				
3. The things we do for each other make us feel part of the family.				
4. We accept stressful events as part of life.				
5. We accept that problems occur unexpectedly.				
6. We all have input into major family decisions.				
7. We are able to work through pain and come to an understanding.				
8. We are adaptable to demands placed on us as a family.				
9. We are open to new ways of doing things in our family.				
10. We are understood by other family members.				
11. We ask neighbors for help and assistance.				
12. We attend church/synagogue/mosque services.				
13. We believe we can handle our problems.				
14. We can ask for clarification if we do not understand each other.				
15. We can be honest and direct with each other in our family.				
16. We can blow off steam at home without upsetting someone.				
17. We can compromise when problems come up.				
18. We can deal with family differences in accepting a loss.				
19. We can depend upon people in this community.				

	Strongly Agree	Agree	Disagree	Strongly Disagree
20. We can question the meaning behind messages in our family.				
21. We can solve major problems.				
22. We can survive if another problem comes up.				
23. We can talk about the way we communicate in our family.				
24. We can work through difficulties as a family.				
25. We consult with each other about decisions.				
26. We define problems positively to solve them.				
27. We discuss problems and feel good about the solutions.				
28. We discuss things until we reach a resolution.				
29. We feel free to express our opinions.				
30. We feel good giving time and energy to our family.				
31. We feel people in this community are willing to help in an emergency.				
32. We feel secure living in this community.				
33. We feel taken for granted by family members.				
34. We feel we are strong in facing big problems.				
35. We have faith in a supreme being.				
36. We have the strength to solve our problems.				
37. We keep our feelings to ourselves.				
38. We know there is community help if there is trouble.				
39. We know we are important to our friends.				
40. We learn from each other's mistakes.				
41. We mean what we say to each other in our family.				
42. We participate in church activities.				

	Strongly Agree	Agree	Disagree	Strongly Disagree
43. We receive gifts and favors from neighbors.				
44. We seek advice from religious advisors.				
45. We seldom listen to family members concerns or problems.				
46. We share responsibility in the family.				
47. We show love and affection for family members.				
48. We tell each other how much we care for one another.				
49. We think this is a good community to raise children.				
50. We think we should not get too involved with people in this community.				
51. We trust things will work out even in difficult times.				
52. We try new ways of working with problems.				
53. We understand communication from other family members.				
54. We work to make sure family members are not emotionally or physically hurt.				

Is there something else which helped your family through an adverse event that has not been described or discussed?

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Appendix E

Family Adaptation and Cohesion Scale II



## CURRICULUM VITAE

### Kristi Openshaw

**Address:** 1215 East 270 South  
Santaquin, Utah 84655

**Telephone:** (801) 472-7784

**E-mail:** [k.openshaw@aggiemail.usu.edu](mailto:k.openshaw@aggiemail.usu.edu)

**Current Employment:** Rehabilitation Counselor, Alpine School District, American Fork, Utah

#### Education

Ph. D. 2011 Utah State University, Logan, Utah  
Degree: Disabilities Disciplines  
Specialization: Rehabilitation Counseling  
Expected graduation date: December 2011

M. S. 2006 Utah State University, Logan, Utah  
Major: Rehabilitation Counseling

B. S. 2004 Utah State University, Logan, Utah  
Major: Psychology  
Minor: Marriage and Family Development

#### Certifications

Certified Rehabilitation Counselor (CRC), expiration date 09/2011  
Licensed Vocational Rehabilitation Counselor (LVRC), expiration date 04/2012

#### Areas of Interest/Specialization

Family Systems, Social Networking, Communities of Practice

#### Teaching

REH 6100 Introduction to Rehabilitation Counseling- Distance/on-campus course  
REH 6110 Medical Aspects of Disability-Distance/on-campus course (teacher aid)  
REH 6150 Case Studies-Distance/on-campus course (teacher aid)  
SPED/REH 1010 Society and Disability-on campus (teacher aid)

### **Student Supervision**

REH 6130 Rehabilitation Counseling Skill Development

REH 6140 Rehabilitation Counseling Practicum

REH 6170 Rehabilitation Counseling Internship

### **Peer-Reviewed Conference Presentations**

Millington, M. and Openshaw, K. (2009, October), Using Social Networks in Job Placement presented at the National Training Conference on Vocational Rehabilitation Education. Washington D. C.

Millington, M. and Openshaw, K. (2009, September). A Social Networking Strategy for Job Development and Placement presented at the National Rehabilitation Association: Embracing Change: New Days, New Ways. Louisville, Kentucky.

Openshaw, K., Millington, M., and Keiner, M. (2009, February). Building Better VR Andragogy Through a Virtual Learning Community presented at the NCRE Conference Rehabilitation Practices and Practitioner: Innovations and Evolution. San Antonio, Texas.

Openshaw, K. and Millington, M. (2008, February). Applied Communities of Practice: The Values, Science, and Practice of the NCRTM presented at the NCRE conference Advancing the Profession's Identity: Turning Vision into Reality. San Antonio, Texas.

### **Conference Presentations**

Openshaw, K. (2011, June). The Families Impact on People with Disabilities presented at the Utah Conference on Effective Practices in Special Education and Rehabilitation: Interventions Across the Lifespan, Logan, Utah.

Openshaw, K. (2010, June). Transition Legislation: Understanding the Rehabilitation Act, ADA, and IDEA presented at the Utah Conference on Effective Practices in Special Education and Rehabilitation: Interventions Across the Lifespan, Logan, Utah.

Openshaw, K. (2009, June). Using Social Networking Analysis in the Job Development Process presented at the Utah Conference on Effective Practices in Special Education and Rehabilitation: Interventions Across the Lifespan, Logan, Utah.

Openshaw, K. (2008, June). Transition to Adult Services: Understanding the Differences in Service Systems presented at the Utah Conference on Effective Practices in Special Education and Rehabilitation: Interventions Across the Lifespan, Logan, Utah.

Openshaw, K. (2007, June). Developmental processes within families during the course of Transition presented at the Utah Conference on Effective Practices in Special Education and Rehabilitation: Interventions Across the Lifespan, Logan, Utah.

Openshaw, K. (2005, June). Understanding Families in Transition presented at the Utah Conference on Effective Practices in Special Education and Rehabilitation: Interventions Across the Lifespan, Logan, Utah.

### **Manuscripts in Process**

Morgan, B. and Openshaw, K. P. (In Press). Targeted Transition Assessment Leading to Job Placement for Young Adults with Disabilities in Rural Areas.

Openshaw, K. P. and Schultz, J. C. (In Review). Family Involvement in the Rehabilitation Counseling Process: A Review of the Literature.

### **Publications**

Openshaw, K., Schultz, J. C., and Millington, M. (2009), Implications of Communities of Practice in Distance Rehabilitation Education, *Rehabilitation Education*, 22 (3).

### **Professional Organizations**

National Rehabilitation Association

Utah Rehabilitation Association

American Rehabilitation Counseling Association-Student Representative (2006)

American Counseling Association

National Counsel on Rehabilitation Education

### **Employment History**

2010-Present Vocational Rehabilitation Counselor  
Alpine School District  
American Fork, Utah

2005-2006 Vocational Rehabilitation Counselor  
Utah State Office of Rehabilitation  
Salt Lake City, Utah

2005 Job Coach/Supervisor  
Deseret Industries  
Layton, Utah

2004 Teacher's Assistant/Job Coach  
STEP'S Davis County School District  
Farmington, Utah