12-2021

Positive Well-Being and Satisfaction with Life: Variables Affecting the Quality of Life of People with Bipolar Disorder

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POSITIVE WELL-BEING AND SATISFACTION WITH LIFE: VARIABLES AFFECTING THE QUALITY OF LIFE OF PEOPLE WITH BIPOLAR DISORDER

A Dissertation

by

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Submitted in Partial Fulfillment of the

Requirements for the Degree of

DOCTOR OF PHILOSOPHY

Major Subject: Rehabilitation Counseling

The University of Texas Rio Grande Valley

December 2021

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ABSTRACT

Treviño-Zuniga, Maria Del, Positive Well-Being, and Satisfaction with Life: Variables Affecting the Quality of Life of People with Bipolar Disorder. Doctor of Philosophy (PhD), December, 2021, 124 pp., 25 tables, 5 figures, references, 177 titles.

Bipolar disorder (BD) is a highly prevalent and severe mental illness of significant public health importance. Characteristics of BD include dramatic shifts in mood, energy, and activity levels affecting a person's ability to carry out day-to-day tasks. These shifts in mood and energy levels are more severe than everyone's regular ups and downs. Managing BD is complex; and social and occupational life disruptions are well-documented, including higher divorce rates, unemployment, and suicide. Research has consistently shown individuals with BD have a higher mortality rate compared with the general population. In addition, BD remains markedly associated with poor clinical and functional outcomes and much stigma and discrimination. However, even though BD is a disabling and life-threatening illness, it can also be manageable.

For individuals with BD, clinical and personal recovery are vital in order to restore social and well-being functioning. Enhancing quality of life (QoL) is a fundamental for a better living. Having a better understanding of well-being and its determinants will enable current evidence-based interventions to be targeted and developed appropriately. Positive well-being and satisfaction with life are variables affecting the QoL of people with bipolar disorder. Psychological practices such as positive psychology (PP) has been building research to become

an evidence-based practice within the positive well-being arena. Positive psychology practices merged from a salutogenic framework, viewing health as positive states of human capacities and at an optimal human stage functioning. Additional research in this area of study is necessary to understand better how and why some individuals with BD can thrive and live well while others do not. This study provides a foundation to continue examining how positive psychology practices can become predictors affecting the overall QoL and well-being of people with bipolar disorder.

DEDICATION

To the Good Lord, all mighty, thank you for allowing this dream of mine to become a reality. I would also like to thank my parents for being such an inspiration in everything I have done. I am very grateful to my mother for always being there to take care of my three boys throughout this journey. As a most humble man with minimal educational studies, my father has been my greatest role model; at a very early age, he taught me the power of having a positive attitude and believing everything is possible when you work hard and never give up. I love you both, Mom and Dad, with all my heart. I am also very grateful for my three boys, Carlos, Gustavo, and Guillermo. Thank you for being patient and resilient the many times I was not entirely there for you. My sons, you three are my life, and everything I do is for you. Special thanks to my greatest supporter and motivator, my darling husband. You have and continue to be my rock. Without your encouragement, love, and support, it would have never been possible to achieve my dream. Thank you to my loving family from deep within my heart.

Lastly, I cannot leave, without making reservations, the most important population that made this dissertation possible, the bipolar disorder community. My respect and wholehearted admiration go to this population for enduring everyday challenges. I hope and pray that the work performed through this dissertation contributes to fundamental-improved outcomes within this mental illness, bipolar disorder. I duly entrust continuing higher research on this most invaluable topic.

ACKNOWLEDGMENT

I wish to express great and humble gratitude to my dissertation committee members for guiding and supporting finalizing my dissertation. Forever grateful to you all: Dr. Jerome Fischer, Dr. Marie Simonsson, Dr. Bruce Reed, and Dr. Sandra Hansmann. Extending in the highest of expressive appreciation towards my committee chair, Dr. Fischer, for trusting and believing in me since day one, always supporting me throughout my most challenging and enduring journey, never giving up, providing valuable guidance in professional practice, rendering moral support throughout, thereby strengthening the beliefs of myself, Thank You, Dr. Fischer! You are indeed an extraordinary professor and a very good man. Forever grateful for all your help guiding me to heights I could only dream of. I promise you that I will give my future students the same enduring support and compassion you provided me along with my program. May the Good Lord continue blessing you and your loving wife forever. Muchas Gracias!!!

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CHAPTER I

INTRODUCTION

Current public mental health records from the beginning of the twenty-first century demonstrate that mental illness is not only a primary public concern but one of society's leading challenges. Nearly one in five U.S. adults live with a mental illness (51.5 million in 2019) (National Institute of Mental Health [NIMH], 2019). This number represents 20.6% of all U.S. adults. However, more than half (56.5 %) of adults with mental illness received no treatment in the prior year.

Mental illnesses include different conditions that vary in severity, ranging from mild to moderate to severe. Mental illnesses include two broad categories (NIMH, 2019). These two categories are Any Mental Illness (AMI) and Serious Mental Illness (SMI). The definition for AMI specifically describes stages of a mental, behavioral, or emotional disorder with an impact level ranging from no impairment to mild or moderate impairment. The definition for SMI describes stages of mental, behavioral, or emotional disorder resulting in severe functional impairment limiting one or more major life activities essential to daily living (NIMH, 2019).

Data from 2019 estimate that 13.1 million adults 18 or older in the United States had a serious mental illness (NIMH, 2019). This number represents 5.2% of all U.S. adults. Bipolar disorder is recognized as a serious mental illness, and the diagnoses include episodes of psychosis (losing touch with reality or experiencing delusions) or high levels of care and

requiring hospital treatment. Along with schizophrenia, major depression, and personality disorder, bipolar disorder is considered as one of the most common and severe mental illness of current times (Kodesh et al., 2012). It is crucial to understand the Schaffer et al. (2015) study in finding out how specific suicide attempts and suicide deaths in BD can support specific data for a better treatment model. Another research study shows how psychotherapy baseline data from a psychotherapy study was used to examine the prevalence of other comorbid psychiatric conditions, and the impact of onset at an early age on both self-harming behavior, and suicide attempts in young people with bipolar disorder (Moor et al., 2012). Results from this study showed that greater comorbidity significantly increased the risk of having self- harmed and attempted suicide with high lethal intent. Self-harming behavior was predicted by having a lifetime diagnoses of borderline personality disorder and panic disorder along with an early age of onset of bipolar disorder. In contrast, previous suicide attempts were predicted by greater comorbidity and not by very early (< 13 years) age of onset (Moor et al., 20212).

Bipolar Disorder and Positive Well-Being: Prognostic Implications & Theory

The Diagnostic and Statistical Manual of Mental Disorders (5th ed.; DMS-5; American Psychiatric Association [APA], 2013) classification of BD includes: bipolar I disorder, bipolar II disorder, a cyclothymic disorder with bipolar and related disorders due to other medical conditions. These four classifications of BD involve evident changes in mood, energy, and activity levels. These moods range from periods of significantly 'up,' elated, and energized behavior (known as manic episodes) to depressed, 'down,' or hopeless periods (known as depressive episodes). Less severe manic periods are known as hypomanic episodes (APA, 2013). Characteristics of BD include debilitating mood swings which impact energy and ability levels to think clearly and function adequately. These mood swings can affect sleep, energy, activity,

judgment, behavior and the ability to think clearly. Despite the mood extremes, people with BD often don't recognize how much their emotional instability disrupts their lives and the lives of others (NIH, 2018; U.S. Department of Health and Human Services, 2015).

Bipolar disorder is a severe psychiatric illness with a poor prognosis. Understanding the pathology may improve treatment and outcomes (El-Mallakh et al., 2021). Bipolar disorder remains a neuropsychiatric condition of significant public health importance. Being complex and multifactorial etiology, it is still primarily unclear assuming genetic and environmental factors.

Current research in finding the causes of BD includes modern molecular biological (e.g., genetic and epigenetic studies), imaging techniques (e.g., positron emission tomography), and functional magnetic resonance imaging (MRI) (Freund & Juckel, 2019). In a more recent study, the authors' conclusion includes that endogenous cardiac steroid dysregulation appears to be a factor for stressors to produce a syndrome of mania or depression via the abnormal neural function (El-Mallakh et al., 2021). In more simple terms, stressors produce increased neurons firing the increase of sodium pump activity. However, with BD individuals, these levels result in deficiency and inadequate sodium pump activity response, resulting in depressive and manic behaviors (El-Mallakh et al., 2021).

Bipolar disorder is a mental illness linking to severe psychological distress and neuropsychiatric condition of significant public health importance (NIMH, 2019). Reports from 2019 NIMH states BD’s result in an average of 9.2 years reduction in expected life span, and as many as one in five patients die by suicide. The struggles to maintain self-efficacy in managing individuals’ lives have been typical among this population (Gilkes et al., 2018). Affected individuals experience significant mood disorders diffused throughout their daily lives via physical, cognitive, and social limitations, such as poor psychomotor control, attention deficits,

and disrupted social role functioning (Michalak et al., 2010). One treatment model of continuous research study is positive psychology (PP). Early studies of happiness, positive character, and motivation go back to great thinkers and philosophers giving birth to an area of great interest and merging into a positive emotion, positive psychology (Seligman, 2012). Positive psychology is centered in the overall of positive well-being of individuals. Positive well-being and life satisfaction hold promise for psychiatric disorders focusing on improving people's psychological well-being and personal recovery (Lopez et al., 2018).

Positive Well-Being: A Theoretical Frameworks

Positive state of human capacities and functioning has related to early concepts of health conceptions. Three of the most known and recognized health conceptions are the pathogenic, the complete state, and the salutogenic framework (Keyes, 2014). The pathogenic approach views health as the absence of disability, focusing more on factors that cause disease. The complete state model definition describes the model as a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity (World Health Organization [WHO], 2005). The salutogenic model views health as positive states of human capacities and functioning in cognition, affect, and behavior. The salutogenic model explores human behavior by studying individuals who presumably live mentally and physically healthy lifestyles. One leading study under the salutogenic model concentrating on improving well-being is positive psychology, model of continuous research study (Robbins, 2015). The PP movement has created interest in constructs such as mindfulness, spirituality, optimism, hope, creativity, empathy, and gratitude and their application to mental health and over well-being. Early studies of happiness, positive character, and motivation go back to great thinkers and philosophers giving birth to an area of great interest and merging into a positive emotion, positive psychology (Seligman, 2012).

Positive psychology is centered in the overall of positive well-being of individuals. Positive well-being and life satisfaction hold promise for psychiatric disorders focusing on improving people's psychological well-being and personal recovery (Lopez et al., 2018). The field of PP has been a growing interest with the potential to become an evidence-based intervention for people with mental disorders (Geerling et al., 2020; Wai, 2020). Potential benefits of PP include empowering individuals to self-manage different areas of their lives, take better control, and have better overall well-being and a higher QoL (Eriksson, 2017; Fukui et al., 2011; Geerling et al., 2020; Lopez et al., 2018; MacKillop & Anderson, 2007; Park et al., 2016).

Seligman's exploration of PP proposed a more in-depth focus on the positive aspect of mental health rather than mental illness. The author suggests that individuals can develop extreme happiness levels by focusing on inherent traits such as optimism, kindness, generosity, originality, and humor. Seligman calls these traits 'signature strengths' and firmly believes that individuals can reach higher positive states (Cloninger, 2005; Seligman, 1990; Seligman, 2002; Wellik & Hoover, 2004). Based on the theory of positive well-being and a higher quality of life, positive psychology is the science and application of psychological strengths and positive emotions (Lopez et al., 2018). The goal of PP is to complement and extend problem-focused psychology. One way to address the focused problem is by identifying and leveraging the strengths and assets of individuals (Park et al., 2016). Positive psychology can explore in four different frameworks: positive subjective experiences (i.e., happiness and gratification), positive individual traits (i.e., life satisfaction and strengths of character), positive interpersonal relationships (i.e., friendship, marriage), and positive institutions (i.e., families, schools, work) (Seligman & Csikszentmihalyi, 2014). Growing evidence of research indicates that positive

mental health protects against psychopathology (Keyes, 2002; Seligman, 1990; Seligman, 2002; Trompetter et al., 2017).

The Galvez et al. (2011) literature review found 81 articles with positive psychological characteristics of bipolar disorder. Results found evidence of the following five positive psychological traits in the lives people with BD: spirituality, empathy, creativity, realism, and resilience. Conclusions for this review study was BD is associated with mentioned above five positive psychological traits, enhancing these attributes may improve outcomes in bipolar disorder.

Positive well-being emerges from the subjective belief that happiness is derived from emotional and mental factors, roots of a positive psychology theoretical frameworks and a salutogenic orientation (Keyes, 2014). The notion of the salutogenic approach is the importance between health, stress, and coping, focusing on what goes well and not on what goes wrong. The focus remains health viewed as a positive state of the human capacity focusing on the solution and not so much in the problem (Joseph, 2015).

The implication gaps among traditional pathological approaches (focusing on the reasons and treatment of the mental health problem) continue of further empirical research studies with efforts for pharmacotherapy and psychological treatments to achieve greater effectiveness levels (Chiang et al., 2017; Oud et al., 2016; Sampogna et al., 2018). By looking through a different perspective, the salutogenic orientation approach (focusing on the traits of healthy and successful persons) literature review has significant increase in the last few years (Marini, 2018). Stage-sensitive treatment approaches are widespread in the general health arena. For example, in cardiac health, heart disease illness signs of progression might include hypertension, metabolic

syndrome, and angina overt cardiac disease. In contrast, staging treatment approaches in psychiatry include less development to other medicine (Murray et al., 2017).

The Alarcon et al. (2013) research study explored multiple factors on how persons with mental disorders, specifically BD, perceived mental health toward living well emotionally, physically, and socially. The focus of this study was a theoretical framework of positive well-being orientation and a higher quality of life. Emerging positive psychological constructs exploration eventually could become critical elements among individuals with BD in their quest for a better living despite the disability. In retrospect, positive well-being constructs could broadly define characteristics individuals are doing well and, therefore, learn how to develop a life worth living (Gander et al., 2013; Warlick et al., 2018). In sum, the growing evidence of research exploring the effectiveness of positive well-being-based strategies remains factual and ongoing.

Bipolar disorder progression is not universal, as research indicates that neuro progression changes are possible with optimal treatment and support (Passos et al., 2016). Staging models aim to guide interventions according to individuals' experiences and their needs at stages of their disorder. For example, research has shown that BD's early stages benefit more from psychoeducation and traditional cognitive behavior therapy. Positive well-being and positive psychology are based on the subjective belief that well-being and happiness are outcomes from emotional and mental factors. In essence, positive psychology interventions are like cognitive behavior therapy, solution-focused theory, and dialectical behavior therapy (Wai, 2020).

The salutogenic approach adopts a positive psychological well-being-based approach in helping individuals flourish (Lopez et al., 2018). Salutogenic approaches facilitate exploring factors linked with individuals' wellness and healthy, happy lifestyles. Accordingly, there is an

increased call for non-pharmacological interventions used as lifestyle-based strategies to prevent, manage, and treat mental health conditions. It remains critical to continue exploring multiple factors contributing to the dichotomy in how many individuals with mental disabilities can have balanced emotional well-being, successful lifestyles, and higher quality of life (Marini, 2018).

Improvement of well-being and personal recovery remains a challenge for many individuals with a severe mental illness. Expressions of dissatisfaction with current treatment approaches, course of the illness and a lower QoL, many individuals state becomes the 'learned helplessness', known as one of the underlying causes of depression (Geerling et al., 2020). As for such outcomes, research shows the importance of individuals' well-being, personal recovery, and success in managing their mental illness.

Implementing positive elements in clinical treatment and daily lifestyle living could improve and enhance individuals' subjective and psychological well-being (Morton, 2018; Murnane et al., 2016). The diverse growing evidence of research indicates effective positive psychological-based strategies demonstrate effectiveness in enhancing overall well-being and may help reduce depressive symptom levels. In the context of public health, PP interventions can be used as preventive, easily accessible, and non-stigmatizing tools with great potential for improving mental health and emotional well-being. (Eriksson, 2017; Fukui et al., 2011; Lopez et al., 2018; MacKillop & Anderson, 2007; Park et al., 2016; Perich et al., 2014).

Statement of the Problem

Many people diagnosed with a severe mental illness experience adverse effects of stigmatization and may internalize such stigma as they struggle to maintain self-efficacy and manage their lives (Hazeldine-Baker et al., 2018). Bipolar disorder remains a mental health condition with a continuous need for further mental health illness studies. Factors affecting the

overall QoL of these individuals indicate BD can have a severe, often enduring, dysfunctional impact on daily lives. It is essential to understand the meaning and significance of lived experiences to address bipolar disorder (Filizer et al., 2016).

The importance of striving for improvement in mental well-being and personal recovery remains vital. Mental health is a state of thriving cognitive function performance, resulting in productive activities, fulfilling relationships with other people, adapting to change, and coping with challenges. Having excellent mental health is essential to personal well-being, family and interpersonal relationships, and contributing to a community or society. Well-being is associated with good health, successful employment, and family. Individuals with high levels of well-being are more productive at work and are more likely to contribute to their communities (Cloninger, 2006).

Positive psychology is a leading field of study concentrating on the improvement of well-being targeting in overall life satisfaction and the quality of life of the individual. However, studies assessing the effects of these interventions, specifically among the BD population, are deficient, scarce (Kraiss et al., 2018).Understanding the role of positive well-being features in BD outcomes endure crucial components for the impact of having a mentally and physically healthy lifestyle, remaining socially integrated, and reporting a higher quality of life. The experience of having BD may enhance certain specific psychological characteristics that are generally viewed as valuable and beneficial, both morally and socially, for this population. The impact of these positive psychological traits in individuals with BD is a vital exploration process to better understand factors associated with a higher QoL and well-being. Positive psychological traits of spirituality, empathy, creativity, realism, and resilience have been associated with mental disorders such as bipolar disorder. Clinical and research attention to preserving and enhancing

these traits may improve outcomes of this disorder (Galvez et al., 2011). Enhancing QoL is a fundamental for a better living. Having a better understanding of well-being and its determinants will enable current evidence-based interventions to be targeted and developed appropriately. Positive well-being and satisfaction with life are variables affecting the QoL of people with bipolar disorder.

Purpose of the Study and Research Questions

Individuals diagnosed with BD must deal with social stigma and impaired QoL and cope with overall negative attitudes. One method to combat stigma is to appreciate the positive aspects of mental illness. Enhancing and recognizing BD's positive aspects can result in more benefits for this population in obtaining higher clinical outcomes and, in return, a higher quality of life. This study aimed to examine the effects of positive well-being and satisfaction with life on the QoL of people with bipolar disorder. Specifically, to what degree do positive psychological concepts and well-being become key elements among individuals with BD in their quest for a better living. The following research questions were used to guide the researcher in the study:

1. What are the demographic factors associated with the QoL of people with bipolar disorder?

H$_0$ I: There is no association among the demographic factors with the QoL of people with bipolar disorder.

2. Is there a significant relationship between psychological well-being and QoL among individuals with bipolar disorder?

H$_0$ II: There will be no relationship between well-being and QoL among individuals with bipolar disorder.

3. Is there a significant relationship between positive psychology practices and QoL among individuals with bipolar disorder?

H₀ III: There will be no relationship between positive psychology practices and QoL among individuals with bipolar disorder.

Significance of the Study

A national report identifies BD as the sixth most disabling condition among the world's top ten (NIH, 2018). Considered among one of the most severe psychological disorders, with high homelessness, suicide, and hospitalization rates. Individuals with Bipolar I disorder experience at least one lifetime episode of mania; many will have co-occurring syndromes such as major depression and anxiety (APA, 2013; Johnson et al., 2016).

With such statistics, BD remains a significant cause of medical burden in the United States (Olfson, 2016). Furthermore, about 5.7 million American adults are affected by a lifetime BD prevalence of 3.9% (Intermountain Healthcare, 2016). Bipolar disorder has a significant impact on people's daily lives, including in the workforce setting. Studies estimate that only 35% of people return to the workforce in the year after hospitalization for mania (Johnson et al., 2016; Modini et al., 2016). Bipolar disorder remains a mental health condition with a continuous need for further studies. Factors affecting the overall QoL of these individuals indicate BD can have a severe, often enduring, dysfunctional impact on daily lives. It is essential to understand the meaning and significance of lived experiences to address people with bipolar disorder (Filizer et al., 2016).

The importance of striving for improvement in mental well-being and personal recovery remains exceptionally vital. The goal of recovery from a mental disorder such as BD must be essential for the well-being of individuals with bipolar disorder. For a successful recovery,

individuals must have a sense of belief and purpose in their life. A science of positive subjective experience and positive individual traits are the essence of positive psychology. The goal is to improve the quality of life of individuals and prevent the pathologies that arise when life is barren and meaningless. Understanding the role of PP features in BD outcomes endure crucial components for the impact of having mentally and physically healthy lifestyles, remaining socially integrated, and reporting higher quality of life.

Assumptions

The following are the assumptions for this study. The instruments used in the study were reliable, volunteer sample population was assumed an underlying normal distribution, sample population was robust with 163 participants, the participants' self-disclosed diagnosis was accurate, participants completing an online survey were literate in reading and comprehending survey questions, participants were motivated to complete self-administered questionnaires independently.

Limitations and Delimitations of the Study

There were several noted limitations to this study. One limitation involved the recruitment and data collection from online platforms and social media. Verification of a BD diagnosis was not a requirement for participants interested in responding to the online survey. Participation was assumed as qualified candidates as individuals with BD and aged 18 or older. The study was limited in generalizability, only to those who had access to an electronic device with internet where able to participate. Another limitation was the self-report measures. Individuals may have not been truthful to all the questions or whether the person taking the survey was the individual with the BD or a family or friend taking the survey for them. In addition, self-reported answers may have been exaggerated. Research participants may have

responded to items because they were embarrassed to reveal private details. The responses to the measures in this study might reflect the various biases of the participants. Overall, in a quantitative research study structured questionnaire leads to limited outcomes, and results cannot always represent the actual occurring in a generalized manner. Respondents have limited options of responses based on the selection of the survey.

Definitions of Terms

Salutogenic

Medical sociologist Aaron Antonovsky introduced the salutogenic theory of sense of coherence as a global orientation to view the world, claiming that people viewing their lives positively, can positively influence their health. The sense of coherence explains why people in stressful situations stay well and can even improve their health (Joseph & Sagy, 2017; Lindström & Eriksson, 2006). This approach views health as positive states of human capacities and functioning in cognition, affect, and behavior (Keyes, 2014). Distinctively, the salutogenic approach is more concerned with the relationship between health, stress, and coping, focusing on what goes well and not on what goes wrong.

Positive Well-Being & Positive Psychology

Positive psychology is the study of how human beings prosper in the face of adversity. Its goals are to identify and enhance the human strengths and virtues that make life worth living and allow individuals and communities to thrive (Seligman & Csikszentmihalyi, 2000). Positive psychology is related to the study of psychological experiences along with strengths and positive emotions (Lopez et al., 2018). In more specific terms, positive well-being, and life satisfaction, are about optimal experiences, people doing and being at their best. Contrary to the pathology model, positive psychology assumes life is more than fixing problems. The focus is more on the

solution and not on the problem. In short, PP is a field founded on the belief that people want to lead meaningful and fulfilling lives, to cultivate what is best within themselves, and to enhance their experiences on all areas of their daily living. Positive psychology is also known as the scientific study of happiness and well-being. In essence, PP is the study of every aspect of an individual that makes life most worth living (Park et al., 2016; Seligman, 1990).

Quality of Life

Quality of life has been considered an essential outcome in treating psychiatric disorders, yet QoL's predictors appeared to need further understanding (Narvaez et al., 2008). Quality of life has been defined as subjective well-being including personal perceptions, and life functional abilities. Complexed and multi-dimensionality, wellbeing expectations are essential features that define a person's QoL at any given time. The World Health Organization (WHO) describes the QoL as 'individual's perception of their position in life in the context of the culture and value systems in which they live, goals, expectations, standards, and concerns' (World Health Organization Quality of Life Assessment [WHOQOL], 1995, p.1405).

Organization of the Study

The emphasis of Chapter 2 is on the review of literature on the prevalence of bipolar disorder, treatment modalities, theory of positive well-being, quality of life, and positive psychology theoretical frameworks through a salutogenic orientation, quality of life factors, emotion dimensions and symptom outcomes within BD. Other variables such as subjective well-being, hope, spirituality, resilience, and mindfulness will also be explored. A closer evaluation of the positive psychology approach will also be included in this chapter. Finally, Chapter 2 will end with a review of contribution of the study.

Chapter 3 includes the discussion of the methodology, research questions, null hypotheses, research design, population sample, instrumentation, procedures, data analysis, and methodology summary. This quantitative research study explored predictive factors contributing to diverse literature reviews and empirical research studies indicating the effects of positive well-being and other positive psychological approaches to help individuals with BD flourish and thrive, becoming successful, happier, and reporting a higher QoL experience.

Chapter 4 covers the analysis and results of this study. This quantitative research study examined the effects of positive well-being and satisfaction on the QoL of people with bipolar disorder. This chapter presents the results from the survey research, volunteer sampling demographics, and the analysis of statistics in response to the research questions. The discussion including the limitation of the study, and research studies comparing this study with other research studies is covered in chapter 5. Lastly, the final summary and conclusion are covered in chapter 6 including recommendations for future studies.

CHAPTER II

REVIEW OF LITERATURE

A U.S. national report identifies BD as the sixth most disabling condition among the world's top ten (NIMH, 2019). Affected individuals experience significant mood disorders diffused throughout their daily lives, physically, cognitively, and socially. Poor psychomotor control, attention deficits, and disrupted social role functioning are common facts among the lives of people with a diagnosis of bipolar (Michalak et al., 2010). This mental illness links to severe psychological distress and neuropsychiatric condition of significant public health importance (Bessonova et al., 2020).

Research has consistently shown individuals with mental disorders such as BD have a higher mortality rate than the general population (Walker et al., 2015). The risk of suicide is high among people with bipolar disorder; an estimated 1 of 4 people attempt suicide, and 1 of 10 succeed. Bipolar disorder remains a serious and severe mental illness generally been viewed as harmful and associated with much stigma. The struggles to maintain self-efficacy in managing their lives are typical endeavors of individuals among this population (Gilkes et al., 2018).

Studies suggest that the absence of well-being creates conditions of vulnerability to life challenges. To endure recovery, individuals must embrace positive functioning such as developing strength enabling behaviors to face challenges, be appreciative and find value in daily experiences even if they are unfavorable (Dunn, 2017; Ryff & Keyes, 1995). Furthermore, other

research studies conclude that the absence of psychological well-being has risk factors for depression, relapse, and recurrence (Wood & Joseph, 2010). In sum, growing research studies validate that QoL is an important indicator of well-being and personal recovery. Furthermore, related concepts of QoL such as well-being assess the positive aspects of a person's life, such as positive emotions and life satisfaction in physical, mental, emotional, and social functioning (Michalak et al., 2005; Ruini & Fava, 2012).

Prevalence of Bipolar Disorder

As a neuropsychiatric condition of significant public health importance, BD's complex multifactorial etiology includes genetic and environmental. Other clinical studies indicate BD symptoms such as chronic mood instability, circadian rhythm disturbances, and constant energy levels affect sleeping patterns and self-cognitive awareness (Harvey, 2008). More data reveals that many individuals with BD cannot complete remission and continue to experience manic or depressive symptoms. As such, further risk factors for relapses include substance abuse, comorbid anxiety disorders, personality disorders, and physical disease (Moreno-Alcázar et al., 2017). Previously publication of data (e.g., Geddes & Miklowitz, 2013) deductions of treatment indicate about 37% of patients with BD relapse into depression or mania within one year, and 60% within two years of initial diagnosis. Also, in a randomized controlled trial, up to 60% of individuals with BD had a history of traumatic events associated with more episode's severity, higher risk of comorbidity, and higher relapse rates. Research studies also report that individuals with mental disorders such as BD have a high mortality rate than the general population (Buhagiar et al., 2011; Lomholt et al., 2019; Walker et al., 2015).

Statistics from the 2019 NIMH reveals that 2.6% of adults in the U.S. live with bipolar disorder. Other research studies state gender is important in unipolar mood disorders as the

number of individuals with a depression diagnosis is more common in females than males. However, for BD, it is perceived an equal rate of illness in women and men (Diflorio & Jones, 2010). More statistical studies also reflect that the prevalence of the U.S. population with a diagnosis of BD within a 12-month prevalence is nearly 83% of cases with a severe classification (NIH, 2018).

The high percentage then explains how persons living with BD usually demonstrate an apparent impairment in psychosocial functioning within essential areas of their lives, such as interpersonal relationships (Maynard, 2016), marriages in the community (Granek et al., 2016), and work (Granek et al., 2018). In terms of economic burden, in the U.S, BD's direct and indirect costs were estimated to be $151 billion in 2009 (Chiang et al., 2017).

Other statistics indicate that BD is positively associated with apparent impairment in working functioning (Walsh et al., 2018). Bipolar disorder is a significant cause of medical burden in the United States (Olfson, 2016). Impaired work functioning may fluctuate during symptoms, exacerbation and may remain after symptoms subside during a bipolar remission (Modini et al., 2016). A significant impact on people's daily lives of this population with BD includes the workforce setting. Consequently, people with mental disabilities face additional social and employment challenges with high unemployment or underemployment rates. Heed, the most significant challenge remains the high mortality rate (Cook, 2006; Modini et al., 2016).

Research has consistently shown that individuals with mental disorders such as BD have a higher mortality rate than the general population. Walker et al. (2015) conducted a meta-analysis using 148 studies of mortality among people with mental disorders (schizophrenia, depression, and bipolar disorder). They examined differences in mortality risks by type of death and diagnosis. Results showed that 135 studies revealed that the mortality rate was significantly

higher among people with mental disorders than the comparison population. A 67.3% of deaths among people with mental disorders were due to natural causes. Another 17.5% were due to unnatural causes, and the remainder to other or unknown causes. The median years of potential life lost were ten years (n = 24 studies). Walker et al. (2015) further estimated that 14.3% of deaths worldwide, from approximately 8 million deaths each year, are attributable to mental disorders.

Treatment Modalities: Pharmacotherapy & Psychotherapy

Treatment approaches available for BD include pharmacotherapy and psychotherapy. Pharmacotherapy remains the first-line treatment for bipolar disorder. The growing body of literature suggests that combined pharmacotherapy and psychotherapy are more effective in treating individuals with BD than medication alone (Chiang et al., 2017). Thus, psychotherapy has been developing as an adjunctive therapeutic tool in improving BD treatment (Ye et al., 2016).

The World Health Organization projects nearly 50% of the U.S. adult population will develop at least one mental illness during their lifetime (Murnane et al., 2016). Approximately one in five people suffer a mental health episode each year, and 1 in 8 adults in the U.S. has a current antidepressant medication prescription (Morton, 2018). Like these projections, various research studies remain congruent with current mental health conceptions in promoting treatment and prevention to improve individuals' overall functioning. The willingness of individuals to accept responsibility for initiating and maintaining health-promoting lifestyles, therefore, remains a continuous challenge (Perich et al., 2014; Trompetter et al., 2017; Wiesmann & Hannich, 2014).

Mood stabilizers, antipsychotics, and anticonvulsants are medications in treating clinical symptoms of BD. Other medications such as lithium and valproate have demonstrated effective medications for acute or dysphoric mania (Baldessarini et al., 2019; Geddes & Miklowitz, 2013; Revicki et al., 2005). Overall, pharmacotherapy and psychotherapy treatment can be long and limited access to, and support of expert is vital for effectiveness. Furthermore, pursuit of improved and pharmacological treatments for BD, as for most psychiatric disorders, is fundamentally limited by lack of coherent of the changes which accompany the mental disorder, bipolar disorder (Revicki et al., 2005).

Psychotherapy Interventions

Other current psychological interventions are cognitive behavior therapy, psychoeducational family intervention, interpersonal and social rhythm therapy, and eye movement desensitization. These treatment components include prevention relapse, stabilizing mood, trauma-related recovery, illness awareness, mood stabilization, and high functioning (Joyce et al., 2017; Moreno-Alcázar et al., 2017). Nonetheless, these same interventions equally create mixed results and sometimes poor outcomes with depressive and manic symptoms, relapse, and hospital admissions (Oud et al., 2016; Reinares et al., 2014).

Not yet recognized as an evidence-based theory, positive psychology is another psychotherapy intervention that is very similar to the theories and techniques such as cognitive-behavioral therapy and dialectical behavioral therapy (Hofmann & Gómez, 2017). However, as a branch of psychology, PP adopts a strengths-based approach in helping individuals flourish. Physical mechanisms connect with human thoughts (Joseph, 2015). Research demonstrates that the human brain has complex neuronal pathways connecting the prefrontal cortex and limbic structures that show that human emotions affect cognitive processes (Ray & Zald, 2012). Thus,

positive thoughts cultivate positive feelings and, in turn, well-being. Respectively, ruminating on negative thoughts cultivates negative feelings, anxiety, and depression (Morton, 2018). Studies on the effects of a positive psychological state on physical health continue to become growing research, yet earlier theoretical frameworks such as salutogenic approaches continue to emerge.

Implication gaps among traditional pathological approaches (focusing on the reasons and treatment of the mental health problem) continue of further empirical research studies with efforts for psychological treatments to achieve greater effectiveness levels (Chiang et al., 2017; Oud et al., 2016; Sampogna et al., 2018).

Staging Model

Stage-sensitive treatment approaches are widespread in the general health arena. For example, in cardiac health, heart disease illness signs of progression might include hypertension, metabolic syndrome, and angina overt cardiac disease. In contrast, staging treatment approaches in psychiatry include less development to other medicine (Murray et al., 2017).

The staging model also suggests using stage-specific treatment approaches that may target symptom reduction. These treatment approaches range from prevention for at-risk individuals to early intervention strategies, complex combination therapy for rapidly recurrent illness, and late stages of illness. There is hope that potential disease-modifying therapies may aid the changes seen in the later cognitive stages of bipolar disorder (Berk et al., 2017). Adjunctive psychosocial interventions BD such as meditation aim to impact illness course via information sharing and skills learned. Staging approaches to BD outline potential psychosocial interventions tailored treatment approaches. For example, evidence suggesting that mindfulness-based psychosocial interventions have potential across early, middle and late stages of mental disorders such as bipolar disorder (Murray et al., 2017).

The progression of BD is not universal, as research indicates that neuro progression changes are possible with optimal treatment and support (Passos et al., 2016). Staging models aim to guide interventions according to individuals' experiences and their needs at stages of their disorder. For example, research has shown that BD's early stages benefit more from psychoeducation and traditional cognitive behavior therapy. In contrast, acceptance-based interventions have been more beneficial in later stages (Joyce et al., 2017).

Salutogenic and Sense of Coherence (SOC)

The salutogenic orientation researchers aim to explore factors to wellness and what makes and maintains individuals with disabilities to be, healthy, happy, and satisfied in life (Marini 2018). This approach views health as positive states of human capacities and functioning in cognition, affect, and behavior (Keyes, 2014). Aaron Antonovsky (1987) introduces this theory's view of health as a non-dichotomous variable and as a health continuum. The salutogenic theory strives to explain how a person moves towards the healthy end of the continuum, thus increasing a sense of coherence (SOC) while also promoting coping skills. For example, when the person has strong SOC, the person will also experience the desire to be motivated to cope (meaningfulness), believe that the challenge is understood (comprehensibility), and trust resources to cope (manageability) (Langeland et al., 2006).

The salutogenic orientation framework presents a more viable paradigm for health promotion research and practice. The sense of coherence framework will also offer a valuable theory for taking a salutogenic mental health research approach (Eriksson, 2017). Contemporary researchers explore pathology and treatment by exploring those traits and conditions that appear to assist individuals with chronic illnesses or disabilities, a positive psychology framework. A salutogenic analysis of the well-being among older age individuals found a significant

relationship between physical and mental health. The SOC becomes a more vital mediator than the psychological characteristics of individuals. However, the resilience factor of coherence and psychological characteristics enables good mental health when confronted with chronic physical health conditions (Wiesmann & Hannich, 2014). The salutogenic theory explains how a person moves towards a healthier end, increasing coping skills (Joseph & Sagy, 2017; Marini, 2018). In simple terms, salutogenic concepts view health as positive states of human capacities, optimal human functioning, and paralleling positive well-being (Keyes, 2014).

Positive Psychology & Life Satisfaction

Much credit has been given to Martin Seligman, in his 1998 APA Presidential Address, with the introduction of PP to the American Psychological Association (Seligman, 1998). However, researchers claim the roots of PP from early scholars such as William James, John Dewey, and Abraham Maslow (Snyder et al., 2014; Warlick et al., 2018). Inasmuch, significant research indicates that PP's principal components date back to these three individuals. These early American pioneers initiated a psychological movement towards an optimal functioning and subjective experience. Such scholars inspired a humanist psychology movement to recognize their historical contributions to the optimal human functioning study. This humanistic psychology movement inspired by James, Dewey, and Maslow followed challenges for the experiential perspective adaptation and creation of more unified psychology for optimal human functioning and additional learning in the humanistic and positive psychology arena (Froh, 2004; Linley & Joseph, 2004; Linley et al., 2006; Rathunde, 2001; Taylor, 2001).

Positive psychology is the science and applications related to the psychological and strengths and positive emotions with the prime question 'what is right about people?' (Wong, 2011, p., 69). As the leading advocate of PP, Seligman has successfully catalyzed research

studies and diverse researchers' PP movement efforts. Nevertheless, the unpresidential question remains, what exactly is positive psychology? Solely, answering the question is parallel to the following meaning: PP is the scientific and applied approach to uncovering peoples' strengths and promoting their positive functioning (Lopez et al., 2018). In simpler terms, PP is simply the scientific study of a healthy and flourishing life.

In Seligman's book, Authentic Happiness: Using the New Positive Psychology to Realize Your Potential for Lasting Fulfillment, the author suggests that by focusing on our mental health, virtues, character strengths, and core values, we can enrich our lives and the lives of those around us, and thereby experience authentic happiness (Seligman, 2002). There are two concepts highlighted in this book, expressing gratitude and signature strengths. Instead of focusing on everyone’s weaknesses, Seligman suggests that we can use sets of exercises conveying the benefits of human gratitude and character strengths and core values to accomplish life satisfaction (Seligman, 2002).

Seligman identifies six clusters of virtues: wisdom, knowledge, courage, humanity and love, justice, temperance, and transcendence (Seligman, 2002). In sum, Seligman's overall message was that when individuals focus their attention on using and enhancing their signatures strengths and not on their weaknesses, overall optimal performance achievement is possible for authentic happiness. Thus, this is the overall notion of positive psychology.

Evidence regarding psychopathology and positive mental health function suggests a dual-factor model through different paths. They are only moderately interrelated (Trompetter et al., 2017). Positive psychology and psychopathology make positive mental health a significant study area. Additional evidence also indicates higher positive mental health buffers against psychopathology (Grant et al., 2013). Exploratory study findings concluded that self-compassion

significantly mediated the negative relationship between positive mental health and psychopathology. Findings from this same study suggested that individuals with high levels of positive mental health possess self-compassion skills that promote resilience against psychopathology. Conclusions included the following: enhancing self-compassion skills can be a promising intervention practice, reduced rumination, and self-criticism factors, improved positive mental health by enforcing factors such as kindness and positive emotions, therefore, reducing future risk of psychopathology. Overall, self-compassion acting as a mental health buffer against psychopathology sheds light as a promising mechanism to enable adaptive emotion regulation during stressful life experiences (Trompetter et al., 2017). Other positive psychology mechanisms such as optimism, hope, and spirituality, just like self-compassion, also enhanced positive mental health recovery (Park et al., 2016; Trompetter et al., 2017; Warlick et al., 2018).

Geerling et al.'s (2020) meta-analysis on PP's effects on mental health among people with severe mental illnesses, including BD, turned mixed findings. Observations were conducted on 729 individuals on their performance of the well-being in psychopathology comparing to control conditions. Within-group effects revealed a moderate effect (Hedge's $g = 0.40$) on well-being and a large effect on psychopathology ($g = 0.70$). Even though no evidence reflected that positive psychology interventions are more effective than others, the finding showed that people with severe mental illnesses benefit from these PP interventions to enhance mental health.

Quality of Life & Well-Being with Bipolar Disorder

Psychological health and physical health are closely related. Much research continues documenting associations between poor psychological health (e.g., depression, anxiety, stress) and increased risk of chronic conditions and diseases such as obesity, hypertension, diabetes, and

cardiovascular disease. Similarly, research also shows that individuals diagnosed with health problems commonly have an increased risk of subsequent psychological problems. Considering psychological and physical health from a disease perspective, recent studies suggest positive psychological functioning matters much for physical health (Kubzansky et al., 2015; Steptoe & Kivimäki, 2013; Suls & Bunde, 2005).

Co-author and director of the Society and Health Psychophysiology Laboratory at the Harvard T.H. Chan School of Public Health, Dr. Kubzansky's (2015) epidemiologic research strongly suggests that positive psychological functioning may promote physiological thriving. Heed, characterizing the well-being as positive feelings and individuals' cognitions evaluating their lives favorable effectively bringing greater well-being and life satisfaction (IsHak et al., 2012; Kubzansky et al., 2015).

Early works of Edwards and Cooper's (1988) theoretical framework review study explored the impacts of PP states on physical health. Results of this research included recommendations for future research to address stress and eustress on health, physical and mental functioning. This framework draws from a cybernetic theory of stress, coping, and well-being defining stress as a negative discrepancy between an individual's perceived state and desired state. According to this theoretical framework model, stress can direct to a double outcome. One outcome relates to psychological and physiological functioning. This outcome represents the mental and physical health of the individual. The second outcome relates to coping efforts to prevent or reduce the negative impact of stress. Consistent with most theories of stress, this model focuses on the negative discrepancies of how stress is perceived. In sum, eustress may improve health directly through hormonal and biochemical changes. Indirectly improvement is

from stimulating existing effort abilities in coping with eustress under the concepts of positive emotions (Edwards & Cooper, 1988).

Stress is a psychological process that occurs when an individual's environmental demand exceeds their adaptive capacity. Stress being both negative and positive, have been in personality and health related studies. When an individual tolerates stress and takes it to enhance his abilities and performance, stress is positive, eustress (Nelson & Simmons, 2003). It is essential to understand how to frame those stressors and challenges to promote a more positive psychological perspective, therefore a well-being development. Although PP constructs remain salient, eustress remains an expanding field in the positive well-being of individuals.

Positive psychology research among individuals with psychiatric diagnoses remains limited (Warlick et al., 2018; Yousaf et al., 2019). Favorably, growing research studies show that practicing positive thinking strategies can improve mental health and happiness (Morton, 2018; Park et al., 2016; Schotanus-Dijkstra et al., 2019; Seligman & Csikszentmihalyi, 2014; Warlick et al., 2018). At the same time, however, PP research among individuals with BD is scattered and needs further study, certainly in assessment, instrumentation, and intervention (Ackerman et al., 2018).

Further studies continue to reveal the importance of information about the impact of the QoL of individuals with BD (Michalak et al., 2010). The 2005 study of Hirschfeld and Vornik ascertains those individuals with BD have higher rates of certain medical conditions than individuals without the disorder. The associations between BD and these medical conditions include migraine, thyroid disease, obesity, diabetes, and multiple sclerosis (Hirschfeld & Vornik, 2005). Along with medical conditions, other affecting conditions for these individuals causing significant impacts include mood disorders diffusing throughout their daily lives via physical,

cognitive, and social limitations, such as poor psychomotor control, attention deficits, and disruptions in social role functioning (Michalak et al., 2010). The use of appropriate medications and adaptations to lifestyles, such as stress reduction and regular sleep/wake cycles, can assist persons with BD in maintaining higher daily functioning levels (Granek et al., 2016).

A cross-sectional study to evaluate patients' QoL with BD reveals that all dimensions are affected, with the mental component particularly more affected than the physical one. This study's conclusion reflects the reality that the whole life of each patient suffering from BD has impairments. Mental illness often also brings stigma, self-efficacy, and self-esteem effects, matters of great concern (Marrag et al., 2015).

The uptake of QoL constructs among individuals with BD increases research and practice (Galvez et al., 2011; Gutiérrez-Rojas et al., 2008; IsHak et al., 2012; Morton et al., 2021). Improvement of the QoL is considered a crucial primary outcome in evaluating treatment success for BD (Murray & Michalak, 2012). Authors of different research studies indicate patients with BD are more likely to have a lower QoL in comparison to the regular population (Gutiérrez-Rojas et al., 2008; IsHak et al., 2012; Marrag et al., 2015). The physical and mental QoL among BD individuals, even in optimal control of depressive symptoms, social support is a factor of enhanced well-being (Gutiérrez-Rojas, 2008). Other studies account for BD with severe impairments, including disruptions to social and occupational life and higher divorce rates, unemployment, and suicide (Rihmer & Kiss, 2002). Furthermore, in a cross-sectional study, results reveal impairments in the whole life of each patient suffering from bipolar disorder (Marrag et al., 2015).

In the areas of assessment and instrumentation, more research review highlights generic health QoL instruments such as the SF-36, the Quality-of-Life Enjoyment, and Satisfaction

Questionnaire were insensitive to BD's (Murray & Michalak, 2012). Authors suggest the Quality of Life in Bipolar Disorder Scale (QoL B.D.) is psychometrically sound and superior to generic QoL scales regarding sensitivity to clinical changes (Murray & Michalak, 2012). The proposal from researchers in this field of QoL, PP and well-being includes the following conclusions.

Individuals can develop extreme happiness levels by focusing on inherent traits such as optimism, kindness, generosity, originality, and humor. Psychology often refers to happiness as positive affect, a mood or emotional state which is brought about by generally positive thoughts and feelings. If some people can have the capacity to reach higher well-being levels essential for mental health recovery, what are the factors leading to this level? In sum, if research studies show PP practices can increase the well-being of a person, then incorporating such techniques with emerging knowledge and training for all mental health professionals and long-established working practices could help with a higher QoL of individuals with mental disorders. (Cloninger, 2005; Seligman, 1990; Seligman, 2002; Seligman & Csikszentmihalyi, 2000; Wellik & Hoover, 2004).

Positive Psychology Interventions (PPI's) and Bipolar Disorder

Studies assessing PP intervention effects among BD populations are limited (Kraiss et al., 2018). The following research studies support positive outcomes of PP interventions among individuals with BD while also identifying gaps in need to further study: enhanced well-being benefits (Geerling et al., 2020); decreased depression, and increased QoL through mindfulness techniques (Palamattathil & De Guzman, 2017); positive benefits in the role of leisure in wellness recovery (Iwasaki et al., 2014); and more significant improvements in positive affect and optimism (Celano et al., 2020).

BD's treatment strategies remain a focal point for patients and family, a component of disease-management programs. One model is collaborative care treatment, in which skills of self-management strategies are expected to enhance patients' self-efficacy, hope, and life functioning (Morris et al., 2005). Substantial evidence indicated that increased medication adherence, decreased relapse, and reduced symptom severity are related to coping and symptom relief strategies through a collaborative model. In this study, collaborative care association had higher patient retention rates (90%), more significant usage of outpatient visits, decreased use of emergency services, no change in inpatient days or overall direct treatment costs, and an increase in patient satisfaction (Bauer, 2002).

In the Morris et al. (2005) study on longitudinal relationships between 1000 patients and their satisfaction with care, levels of hope, and life functioning, the examinations' results indicate the following. The increase of care satisfaction is associated with decreased hopelessness, as decreased hopelessness is associated with better life functioning. Morris et al. (2005) study demonstrates evidence support for the hypothesized mediational pathway between care satisfaction, hopelessness, and life functioning. Additional findings also suggest that providing maximal care to patients through concepts such as hope, indeed, becomes very important (Morris et al., 2005). On the same spectrum, studies of psychological well-being concepts such as hope, not much different from other personal factors like religion and spirituality, are increasingly being examined in psychiatric research (Koenig, 2009).

Psychological Well-Being

Psychological well-being (PWB) focuses on how individuals interact with others. Furthermore, PWB encompasses self-acceptance, autonomy, the purpose of life, positive

relationships with others, and personal growth (Ryff & Keyes, 1995). Thus, Wood and Joseph (2010) concluded that an increase in PWB protects against relapse and recurrence of depression. The increased interest in concepts such as PWB, QoL, and optimal human functioning contributes to the growth of PP research (Cloninger, 2006; Ruini & Fava, 2012).

Positive well-being and positive psychological constructs act on all positive aspects that make life worth living (Seligman, 2002). These essential concepts directly increase research on positive emotions (Edge et al., 2013), locus of control (Buhagiar et al., 2011), human strengths (Peterson & Seligman, 2004), and other PP traits such as hope, compassion, spirituality, optimism, mindfulness, flow, and happiness. In essence, the experiences of positive emotions theory and findings suggest that the capacity to practice positive emotions may be a fundamental human strength key to human flourishing. (Ackerman et al., Cloninger, 2006, 2018; Lopez et al., 2018; Park et al., 2004; Warlick et al., 2018).

Dimension of Positive Psychology: Life Satisfaction

With the emerging field of PP, early central researchers have studied life satisfaction and its meaning (Huebner, 1991; Park et al., 2010). Shin and Johnson (1978, p.478) defined life satisfaction as a 'global assessment of a person's quality of life according to their chosen criteria'. Research has shown that satisfaction with life is one of the strongest indicators of mental health and a central concept of PP (Talaei-Khoei et al., 2018).

A critical concept in PP is the meaning of life and a sense of well-being, belonging, and life satisfaction (Seligman, 1998). Authors of a cross-sectional study, Talaei-Khoei et al. (2018), measured life satisfaction moderates and the effects of pain intensity on individuals with physical impairment. The participants completed the Satisfaction with Life (SWL) scale, the PROMIS Pain Intensity, and the Pain Catastrophizing Scale. Conclusions indicated satisfaction with life

appears to buffer the overall effect of pain, suggesting PP interventions such as mindfulness training, gratitude, acceptance, and commitment may have improved outcomes among this population (Talaei-Khoei et al., 2018).

Ackerman et al.'s (2018) systematic review of measurement scales found the Diener and colleagues' SWL scale (1985) was the most cited scale in the Google Scholar database. Other research studies indicate life satisfaction measurement such as the Quality-of-Life Enjoyment and Satisfaction Questionnaire (Q-LES-Q) and its short form (Q-LES-Q-SF) are the most frequently used outcome measures in psychiatry research (Stevanovic, 2011).

Positive psychological constructs in the areas of assessment and measure have been leading attention in research and practice. However, areas of concern continue specifically expanding in assessing and measuring positive well-being domains (Wood & Tarrier, 2010). A systematic review of measurement examined how these constructs have been operationalized, measured, validated, cited, and applied to research studies (Ackerman et al., 2018).

Through this review study, the authors offered an overview of the six most cited positive constructs and scales used: well-being, Satisfaction with Life scale (Diener et al., 1985), positive and negative affect, Positive and Negative Affect Schedule, PANAS (Watson et al., 1988), optimism, Life Orientation Test-Revised, LOT-R (Scheier et al., 1994), self-esteem, Rosenberg Self-Esteem Scale, SES (Rosenberg, 1965), well-being, Psychological Wellbeing Scales, PWBS (Seifert, 2005), and hope, Hope Scale/Adult Dispositional Hope Scale, ADHS (Snyder et al., 1997). In sum, scales are considered as positive psychological measures, if the factors encouraged for greater mental well-being, personal recovery, increased happiness, hope, optimism, and increased satisfaction with life (Ackerman et al., 2018; Kraiss et al., 2018; Murray & Michalak, 2012.

Positive well-being and life satisfaction involve multidimensional constructs with a continuation in development and revolution. Diverse research studies indicate positive psychological factors (i.e., coherence, hope, spirituality, religion, well-being, life satisfaction, self-compassion, resilience, and mindfulness) have strong correlations with mental health recovery (Ackerman et al., 2018; Kraiss et al., 2018; Murray & Michalak, 2012; Ruini & Fava, 2012).

The results exploring in this chapter indicate how such practices promote healing and act as buffers for many individuals with severe mental disorders such as bipolar disorder. Positive psychology constructs such as hope, spirituality, religiousness, mindfulness, and resilience were given earliest roots of happiness and motivation, grounded on the notion of great thinkers and philosophers such as Confucius, Mencius, and Aristotle (Kim, 2016; Seligman & Csikszentmihalyi, 2000).

In more recent times, the creation of the school of happiness began studying positive emotions through a more scientific approach. As pioneers of positive psychology and among the most eminent psychologists today, Seligman's aim focused on teaching people to be happier through the following three specific aspects: the pleasant life (encouraging positive emotions), the good life (human virtues and personal strengths) and the meaning of life (virtues and strengths) (Seligman, 1990; Seligman & Csikszentmihalyi, 2000; Seligman & Csikszentmihalyi, 2014).

Hope and Mental Health

In humankind's history, there has been the need to believe that bad could become good, that the ugly could become beautiful, and, as such, problems could disappear. The common denominator for this belief has been the positive psychological constructs such as hope (Warlick

et al., 2018). Hope continues as an element among humankind, crossing time and cultural boundaries. Ever since the classic Greek myths of Pandora's box, the story about the origin of hope continues as an integral part of human beings (Snyder, 1994). The study of hope and its role in the mental health arena remains essential for this field (Lopez et al., 2018).

The definition of hope has been subject of different interpretation, specifically in relation to certain psychological constructs. Lopez et al. (2018) defined hope as goal-directed thinking in which the person utilizes pathways thinking and agency thinking. Pathway thinking represents the perceiving capacity to find routes to desired goals. Agency thinking represents the required motivations to use those routes. The study of hope within the mental health field has grown as well as the developed instruments. The hope construct has been associated with higher well-being and higher coping skills (Irving et al., 2004). Other studies also show that higher levels of hope are related to lower depression and anxiety levels (Geffken et al., 2006).

Findings from a quasi-experimental study examining the effects of the Wellness Recovery Action Plan (WRAP) participation on psychiatric symptoms, hope, and recovery outcomes among individuals with severe mental illness revealed statistically significant group intervention effects for symptoms and hope. Planned comparisons showed statistically significant improvements for the experimental group in psychiatric symptoms and hoped after the intervention, while non-significant changes occurred in the comparison group (Fukui et al., 2011).

Spirituality and Religiousness

While concepts of spirituality and religion are interrelated and often overlapped, merit must not be distinguished when discussing these two important concepts in the mental health arena. According to Koening (2012) et al., spirituality is a complex concept. The author

describes spirituality as seeking meaning in life, the relations with the sacred or transcendent, and the connection with a higher power or supreme being. Religiousness can be defined as the extension to which an individual believes and practices a religion; usually, such beliefs influence people's lifestyles and how they treat others (Vitorino et al., 2018).

The impact of religious and spiritual practices on clinical effects in patients with serious mental illnesses such as BD remains in debate. Mizuno et al. (2018) international cross-sectional study findings regarding religiosity and spirituality well-being showed a strong positive correlation with resilience ($r = 0.584$, $P < 0.001$). The protective effects of religiosity in resilience, social functioning, and psychopathology were not significant in their sample. Overall, the authors of this study indicated that spirituality well-being appears more relevant to resilience than religiosity.

Researchers' link between spirituality and religion continues being studied as various undergoing studies continue ascertaining positive associations between the two concepts, spirituality and religion, and positive psychology (Dein, 2018). To date, diverse research demonstrates positive associations between spirituality and religion and positive psychology. General results state that more religious persons are generally in a much better state of mind (Koening, 2009). Furthermore, the move active in religious matters with an attitude of faith, the greater hope, increased sense of meaning in life, higher self-esteem, optimism, and life satisfaction (Kelley et al., 2016; Vitorino et al., 2018). Other studies also indicate that high involvement in religion is associated with lower rates of suicide, reduced use of drugs and alcohol, and reduced delinquency (Dein, 2018).

Religious and mystical experiences were explored among individuals with BD in mental health care institutions in the Netherlands, revealing different experiences during manic and

depressive episodes (Ouwehand, 2020). This study indicated that during manic episodes, patients reported more religious and spiritual experiences (divine presence unity, mission, meaningful synchronicity). During episodes of depression, patients experienced an absence of religious or spiritual practices (Ouwehand, 2020). Addressing the religious experiences during manic or psychotic episodes requires clinical practice. The overall intention of this study was to investigate what sort of religious and spiritual experiences individuals with BD have and how these individuals interpret those events every day of their lives.

Mindfulness and Resilience

The concept of mindfulness has roots in Buddhist philosophy, and its application to Western health context began in the 1970s (Mikulas, 2007). In psychological interventions, mindfulness includes the following defining concepts: paying attention in a way, deliberating awareness of experience in the present moment in a non-judgmental perspective while also validating these experiences (Murray et al., 2017). Chiesa and Malinowski (2011) note critical differences in mindfulness and mindfulness meditation concepts in Western mindfulness-based therapies compared with Buddhist meditation philosophies. In Western mindfulness-based therapies, practices become health benefits and primary goals to accomplish. In Buddhist schools, health benefits are secondary aims as their primary interest is understanding the root cause of suffering. For Western mindfulness philosophies, concepts such as acceptance are more important. Understanding the nature of the problem is not essential, but finding ways to remove the problem/symptoms is their primary goal (Perich et al., 2014)

Mindfulness-based approaches are popular in the treatment of a variety of psychiatric disorders. Continuous research studies have examined how mindfulness mediation may ameliorate cognitive deficits associated with BD and reduce the impact of stress in managing

day-to-day life events. Initial results of mindfulness-based cognitive therapy studies for those with bipolar disorder are promising; however, further research is needed to examine the efficacy of these approaches in the long-term management of this disorder (Perich et al., 2014). An extensive literature review examines how a mindfulness intervention may help manage BD and other common comorbidities such as anxiety disorders. Furthermore, cognitive deficits in association with BD have ameliorated through mindfulness meditation, reducing the impact of stress in daily life events (Murray et al., 2017; Perich et al., 2014).

Review of Literature Summary

Clinical recovery is a crucial component for individuals with BD; the importance of improving mental well-being and personal recovery remains incredibly vital. One leading field of study concentrating on the improvement of well-being is positive psychological well-being and life satisfaction. Nevertheless, studies assessing the effects of positive psychology interventions, specifically among a population of BD, are deficient, scarce (Kraiss et al., 2018). Other studies promote positive well-being practices with strong indicators and correlations between BD and positive emotional response (Galvez et al., 2011; Loban et al., 2012; Joseph, 2015).

In summary, positive psychological well-being involves multidimensional constructs with continued undergoing development and revolution. Chapter 2 explores various research studies indicating how certain variables (i.e., coherence, hope, spirituality, religion, well-being, resilience, and mindfulness) have strong correlations with mental health recovery. The results explored in this chapter indicated how certain practices promoted healing and acted as buffers for individuals with severe mental disorders. However, these studies are minimal among a population of bipolar disorder. Limitations include clinical applications not being addressed,

population sampling not producing generosity, and the need to further research studies to inform more intense evidence-based practices. In addition, positive well-being constructs and BD prevalence and modalities covered in this chapter will remain of growing interest in the mental health field. The goal for well-being and a higher quality of life is understanding and facilitating optimal mental health. Individuals with BD may very well benefit from these practices, optimal mental health facilitation. For all these, and despite such statistics mentioned in this chapter, there are relatively few studies assessing the factors associated with thriving experiences and higher QoL experiences among individuals with bipolar disorder.

Contribution of the Study

Streams of research indicate that psychosocial interventions are helpful in the treatment process adjuncts to pharmacotherapy for BD. However, more research continues to be in need to improve outcomes for people with BD (Oud et al., 2016). Research with an emphasis on recovery is known explicitly as 'a deeply personal, unique process of changing one's attitudes, values, feelings, goals, skills, and roles a way of living a satisfying, hopeful, and contributing life even with limitations caused by illness' (Anthony, 2000, p.159). Mental health frameworks and existing psychosocial interventions for a recovery process for BD disorders remain sensitive and require more research. Over the past ten years, positive psychological and well-being interventions such as mindfulness-based therapy on the subjective QoL in BDs have shown small effects sizes, yet more studies are needed for further data. Numerous studies demonstrate an impairment in QoL of individuals with BD, even despite symptom improvement with medications (Galvez et al., 2011; IsHak et al., 2012; Murray et al., 2017; Oud et al., 2016).

The positive well-being, life satisfaction and other positive psychological aspects of BD are importance the public and to the mental health community. The relationship between social

stigma and the QoL of these individuals are accompanied by negative emotions reactions leading to social withdrawal, feelings of anger and a lack of empathy. Social stigma is likely to affect the well-being and the overall quality of life (Galvez et al., 2011).

CHAPTER III

METHODOLOGY

The sections of this chapter re-introduce the research questions, describes the research context, outline the procedures for population sampling, instrumentation, data collection, data analysis, and explain the study's limitations and delimitations to describe ethical safeguards and considerations in place.

This quantitative non-experimental research examined predictive factors associated with positive well-being and satisfaction with life traits and a higher QoL among individuals with BD. The study was designed to investigate and analyze how some individuals diagnosed with BD manage their daily lives well and thrive despite their disability, while others struggle with their illness. Descriptive statistics identification and results using multiple regression analyses and correlations analysis determined the relative contributions of the variables studied.

The purpose of this chapter was to describe how the research questions proposed in this study were answered. This research study is exploratory in nature. This quantitative study focuses on predictive factors associated with positive psychological thriving traits and higher QoL experiences among individuals with bipolar disorder. The dependent variables explored were the QoL and subjective psychological well-being of individuals with bipolar disorder. Independent variables included the following demographic factors: age, gender, sexual orientation, relationship status, religion, religious services engagement, education attainment, income level,

years of diagnosis, hospitalization history, treatment plan, educational and work engagement. Other independent variables explored were but were not limited to life satisfaction, positive psychological well-being practices and concepts such as hope, optimism, autonomy, self-care, spirituality, resilience, compassion, gratitude, and mindfulness.

Research Questions

The following research questions were used to guide the researcher in the study:

1. What demographic factors are associated with the QoL of people with bipolar disorder?

H₀ I: There is no association among demographic factors with the QoL of people with bipolar disorder.

2. Is there a significant relationship between psychological well-being and QoL among individuals with bipolar disorder?

H₀ II: There will be no relationship between well-being and QoL among individuals with bipolar disorder.

3. Is there a significant relationship between positive psychology practices and QoL among individuals with bipolar disorder?

H₀ III: There will be no relationship between positive psychology practices and QoL among individuals with bipolar disorder.

Research Methodology

This study employed a descriptive survey research design. This quantitative research design was chosen for this study because it was the most appropriate study design to allow the researcher to establish statistically significant results. According to Creswell (2009), the quantitative research design employs deductive reasoning, formed a hypothesis, and collects data

to investigate the problem. This study's identified problem is the lack of knowledge related to exploring individuals with BD and their QoL and well-being. How can those individuals with BD live mentally and psychologically well, thrive, and flourish despite their disability? More questions remain: which factors are involved? Why do some individuals do much better while others continue to struggle with their condition?

Quantitative research allowed the researcher to collect data utilizing surveys, make predictions based on the hypothesis, and formulate a plan to test the hypothesis (Creswell, 2009). This quantitative research study examined predictive factors associated with the quality of life and individuals with BD's well-being. Specifically, concepts for exploration were the relationships between QoL and BD, subjective well-being, spirituality, resilience, autonomy, and mindfulness. Factors associated with positive well-being impacting individuals with BD in having mentally and physically healthy lifestyles, remaining socially integrated, and reporting a higher QoL were studied and explored. Multiple regression and correlations analyses were used to determine the relative contributions of the variables studied.

Research Design

This study was a non-experimental, quantitative survey design. Exploratory in nature, this quantitative research study had several dependent variables: the QoL of BD and their subjective well-being. This type of design was appropriate as the independent variables included a 13-item questionnaire from the demographic survey: age, gender, sexual orientation, relationship status, religion, religious services engagement, education attainment, income level, years of diagnosis, hospitalization history, treatment plan, educational and work engagement. These variables were not manipulated, and no treatment or intervention was provided to the study (Mills & Gay, 2015). The other independent variables included constructs from the scale's

surveys: Quality of Life in Bipolar Disorder (QoL.BD) Questionnaire (Michalak et al., 2010; Morton et al., 2021), the Scale of Psychological Well-Being-Short Form (SPWB-SF) (Ryff & Keyes, 1995), and the Satisfaction with Life (SWL) scale (Pavot & Diener, 2008). Analysis in management with the computer software, the Statistical Package for the Social Science (SPSS) Version 25 (2017), was used for data analysis (Verma, 2012). All statistical tests were performed with an alpha level of 0.05 to reduce the probability of getting a Type I error (Green & Salkind, 2013).

This exploratory study's overall objective was to examine if psychological well-being, personal skills, or traits such as hope, optimism, spirituality, resilience, compassion, gratitude, and mindfulness serve as buffers or a mechanism for a higher QoL. Sampling consisted of the recruitment through social media platforms. Participants self-identified as having a BD diagnosis, and medical diagnosis verification was not required.

Population Sample

After the University of Texas Rio Grande Valley (UTRGV) Institutional Review Board (IRB) approval, the recruitment process included contacting participants diagnosed with BD via online social media websites and platform forums of BD support groups. G∗ Power was used as a power analysis for the number of participants for the volunteer sampling. To meet the criterion for this study, participants required self-identification meeting DSM-V bipolar disorder diagnosis based on a clinical assessment by a psychiatrist or mental health practitioner, be at least 18 years or older, and being able to communicate in the English language.

A volunteer sample of participants completed an online survey using Qualtrics™ (Qualtrics, L. L. C., 2014). In meeting the criteria for this study, participants self-identified as having met DSM V criteria for bipolar disorder, be at least 18 years or older, and communicate

in the English language. Recruitment in reaching potential participants consisted of social media networking websites such as Facebook, Twitter, LinkedIn, Reddit, and Pinterest. A volunteer sampling method using these social networking sites was done to recruit potential participants. Volunteer sampling is a type of convenience sampling, where the decision to participate strongly relies on respondents due to the non-individualized nature of invitations (e.g., general invitation for participation appearing in social media, web page, etc.) (Vehovar et al., 2016). A link to the Qualtrics survey was posted on each social media website with an open invitation to click on the link if participants met the participants' criteria and were willing to complete the survey. This technique's main advantage was to expand at a national and international scale with the sample collection. Virtual networks in non-probabilistic sampling increasing the sample size and representativeness (Baltar & Brunet, 2012).

Electronic surveys were anonymous; at no point in the study were participants asked to provide their names or other identifying information about themselves. The estimated time to complete online surveys was 7-15 minutes. According to Mills and Gay (2015), quantitative research permits participants' responses to the survey items as honest due to their anonymous format. Data collection was from a large group that would be more representative of the population, individuals with BD.

A power analysis done determined the specific number of subjects participating recommended for this study. Power analysis was used to determine the sample size required to detect an effect of a given size with a given degree of confidence. In this study, the effect size and power analysis are based on the number of independent (n = 13) and dependent (n = 2) variables and were used to determine the sample size. Accordingly, it was required at least 130

students to participate with an effect size of .80 at an alpha of .05 (Soper, 2020). The study oversampled having a total of 163 individuals as participants in the research.

Social media platforms are increasingly being used to disseminate social marketing messages about mental health and well-being. Social media initiatives' effectiveness can be evaluated through a range of performance indicators (Grant-Muller et al., 2014; Neiger et al., 2012). A key measure of practical social media usage is audience engagement. A recent study done by Yap et al. (2019) presented a range of message appealing media to enable mental health promotion and stigma reduction messages. This 2019 study examined the relationship between the type of message appeals and audience engagement. Among the analysis, results suggest that mental health promotion messages may engage a larger audience through the construct of affiliation and hope as they linked to a positive impact on the number of shares. The belief is that this effect increases participants' engagement and increased audiences into vocal advocates for mental health promotion and stigma reduction messages. In essence, images of people appearing happy and in good spirit invites the audience to act the same.

An anonymous Qualtrics survey link was posted on these social media websites using a flyer with an engaging mental health positive message using hope and affiliation concepts. Accordingly, the initial selection and potential participants' contact for this study was made through social media platforms. The inclusion of an advertisement illustration focusing on positive emotions was part of the social media invite to participate in the survey (see Figure 5).

Instrumentation and Procedures

Participants were asked to complete online surveys to include a brief demographic questionnaire and three scales with Likert-type questions via electronic surveys using

Qualtrics™ (Qualtrics, L. L. C., 2014). The time estimated for completion of electronic surveys were 7-15 minutes.

The demographic questions consist of 13-items: age, gender, sexual orientation, relationship status, religion, religious services engagement, education attainment, income level, years of diagnosis, hospitalization history, treatment plan, educational and work engagement. The demographics information included the marital status of each participant, assessing involvement in a personal relationship. This information was intended to become a snapshot of the relational dynamics of the study participants. Participation was voluntary, and participants had the option to discontinue participation at any time. There were no direct benefits to the subjects. The foreseeable risks associated with this study were the following. If participants would encounter any psychological or emotional distress resulting from reading survey questions, advice was given to (a) seek immediate help through a mental health professional or their current medical provider, (b) or refer to the resource section below indicated in the informed consent.

Reliability

Volunteer sampling does not involve the use of randomization to select research participants. The findings may be appropriate for people who resemble those participating in the research. Physiological measurements were used to explore the constructs (Rovai et al., 2013). The following are the three scale instruments utilized for the survey questions for this study.

The Quality of Life in Bipolar Disorder (QoL B.D.) Questionnaire. The QoL B.D. is a 56-item disease-specific self-report measure designed to capture patients' subjective perceptions of QoL (physical, sleep, mood, cognition, leisure, social, spirituality, finance, household, self-esteem, independence, and identity). Patients describe their experiences over the past seven days

on a 5-point Likert scale ranging from strongly disagree (1) to agree (5) strongly. The Cronbach's alpha for this scale was 0.87 (n = 199) (Michalak et al., 2010).

The scale of the Psychological Well-Being-Short Form (SPWB-SF) is a widely used, 18-item self-report scale designed to measure psychological well-being. Participants responded to each item using the Likert scale ranging from strongly disagree (1) to agree (5) strongly. The instrument comprises six subscales: Life Purpose, Personal Growth, Positive Relationships with Others, Autonomy, Environmental Mastery, and Self-Acceptance. The SPWB-SF has been shown to correlate positively with happiness and life satisfaction measures and negatively with measures of depression. Subscales on the short form version correlate highly with those on the original form (α = .70 to .89) (Ryff & Keyes, 1995).

The Satisfaction with Life (SWL) scale has four items assessing how satisfied participants were across work, economic security, social activities/relationships, and living arrangement domains on a 1 (very satisfied) to 5 (very dissatisfied) scale. The coefficient alpha for the scale has ranged from .79 to .89, indicating that the scale has high internal consistency (Pavot & Diener, 2008).

Data Analysis

In quantitative research methodology, the construct is a concept for a set of related behaviors or characteristics of an individual that cannot be directly observed or measured. Consequently, for this study, the researcher first operationalized the constructs in order to collect data. Accurate identification of valid test instruments and scales was utilized to operationalize the exploring constructs through a non-probability population sampling (Rovai et al., 2013).

For this quantitative research study, descriptive statistics were used in data analysis. Descriptive statistics is a way to summarize large datasets and to detect patterns in the data in

order to convey their essence to others and allow for further analysis of inferential statistics. Ordinal scaling ranked the order of the items in terms of which has less, and which one had more quality represented by the variable. Instruments used included Likert scales; nominal and ordinal scaling was done to categorized demographic data (Rovai et al., 2013).

For research question 1, 'What are the demographic factors associated with the QoL of people with bipolar disorder?' the demographic factors (age, gender, sexual orientation, relationship status, religion, religion services engagement, education attainment, income level, years of diagnosis, hospitalization history, treatment plan, educational and work engagement) were regressed on the dependent variable, the QoL of individuals with BD. Multiple linear regression analysis Stepwise Forward was used as it allowed every variable to be first in finding stronger relationships among all the variables (Green & Salkind, 2013).

For research question number 2, 'Is there a significant relationship between psychological well-being and QoL among individuals with bipolar disorder?', the six subscales for the Psychological Well-Being Short Form (SPWB) Scale were regressed using multiple linear regression analysis Stepwise Forward on the dependent variables QoL.B.D. The interest in research question two was to find significant relationships between the subscales from the SPWB Scale (life purposes, personal growth, positive relationships with others, autonomy, environmental mastery, and self-acceptance) and the dependent variable, the QoL of people with bipolar disorder.

For research question number 3, 'Is there a significant relationship between positive psychology practices and QoL among individuals with bipolar disorder?', the Satisfaction with Life scale was correlated with the QoL of individuals with BD. Multiple linear regression

analysis Stepwise Forward determined the most significant independent variables for the research questions in the data analysis.

Multiple regression analysis allows the independent variable to be independent of each other. A major violation of statistical assumption is multicollinearity among independent variables meaning that the independent variables are highly correlated. The variable influence factors (VIF) in SPSS were used to check for violation of collinearity. For this study, there was not a problem of multicollinearity. Furthermore, the means (M) demonstrated values for continuous variables. Numbers (percentages) demonstrated the values of categorical variables to describe the data (Rovai et al., 2013). Comparing the differences in well-being and positive psychological skills among people with BD was done based on individuals' traits from the demographic data.

The data analysis was conducted using the Statistical Package for the Social Science (SPSS) Version 25 (2017). Data was analyzed using descriptive statistics (percentage, mean, and standard deviation), preliminary screening procedures, and regression analysis to analyze the research questions from the obtained data. Descriptive statistics was computed for all independent/predictor variables and the dependent/criterion variables to examine the shape of the distribution (normal distribution, skewness, kurtosis), central tendency (mean, median, mode), and dispersion (range, standard deviation, variance) (Green & Salkind, 2013).

Summary of Methodology

In this chapter, the researcher described the research methodology employed for this quantitative study, including the research question and hypothesis, participants, assessment instruments, data collection procedures, and data analysis methods. For this study, the focus was on the predictive factors associated with positive well-being behaviors, allowing BD to thrive in

their lives and report a higher QoL experience. The dependent variable was individuals with BD and their QoL experiences. Independent variables include the following demographic factors: age, gender, sexual orientation, relationship status, religion, religious services engagement, education attainment, income level, years of diagnosis, hospitalization history, treatment plan, educational and work engagement.

Recruitment to reach potential participants consisted of social media networking websites such as Facebook, Twitter, LinkedIn, Reddit, and Pinterest. Qualtrics, a computer software, was used for data analysis. All statistical performed with an alpha level of 0.05 was done to reduce Type I error probability. Descriptive statistics is a way to summarize large datasets and to detect patterns in the data in order to convey their essence to others and allowed for further analysis of inferential statistics (Green & Salkind, 2013).

CHAPTER IV

RESULTS

For this study, the focus was on the predictive factors associated with positive well-being behaviors, allowing BD to thrive in their lives and report a higher QoL experience. This chapter presents the results of demographics and statistical analysis of the research that includes Pearson Product Moment (PPM) correlation, and multiple linear regressions that include stepwise methods of regression. The dependent variable was individuals with BD and their QoL experiences. Independent variables include the following demographic factors: age, gender, sexual orientation, relationship status, religion, religious services engagement, education attainment, income level, years of diagnosis, hospitalization history, treatment plan, educational and work engagement. This chapter presents the results from the survey research, volunteer sampling demographics, and the analysis of statistics in response to the research questions.

Hₒ I: There is no association among the demographic factors with the QoL of people with bipolar disorder.

1. What demographic factors are associated with the QoL of people with bipolar disorder?

Hₒ II: There will be no relationship between well-being and QoL among individuals with bipolar disorder.

2. Is there a significant relationship between positive psychology practices and QoL

among individuals with bipolar disorder?

H₀ III: There will be no relationship between positive psychology practices and QoL among individuals with bipolar disorder.

3. Is there a significant relationship between positive psychology practices and QoL among individuals with bipolar disorder?

The purpose of this chapter is to present the data and the statistical results from the study. Descriptive statistics through multiple linear regression and correlation analyses were used to describe the sample, followed by several statistical analyses to test each research hypothesis. An alpha level of 0.05 was utilized to test the null hypothesis. For this quantitative research study, descriptive statistics were used in data analysis. Computer software, IBM SPSS Statistics Version 27 (2020), was used to analyze data (Verma, 2012).

Sample

Volunteer sampling was used for this research study. A total of 163 individuals self-identified with a diagnosis of BD completed the online survey posted on social media support groups' websites (Facebook, Twitter, Linked In, Reddit, and Pinterest). A power analysis was conducted to determine a sample size of 130 with a consideration of an α level of .05 and an effect size of .80 (Soper, 2020).

Three scales used for this study were the following: The Quality of Life in Bipolar Disorder Scale (QoL B.D.), the Psychological Well-Being-Short Form Scale (SPWB), and the Satisfaction with Life (SWL) scale. The QoL B.D. scale consisted of 56-items disease-specific self-report measure designed to capture patients' subjective perceptions of QoL (physical, sleep, mood, cognition, leisure, social, spirituality, finance, household, self-esteem, independence, and

identity). Participants described their experiences over the past seven days on a 5-point Likert scale ranging from strongly disagree (1) to agree (5) strongly. The Cronbach's alpha for this scale was 0.87, N = 199 (Michalak et al., 2010).

The SPWB consisted of an 18-items self-report scale designed to measure psychological well-being. Participants responded to each item using the Likert scale ranging from strongly disagree (1) to agree (5) strongly. The instrument comprised six subscales: Life Purpose, Personal Growth, Positive Relationships with Others, Autonomy, Environmental Mastery, and Self-Acceptance. The SPWB-SF has been shown to correlate positively with happiness and life satisfaction measures and negatively with measures of depression. Subscales on the short form version correlate highly with those on the original form: $\alpha = .70$ to .89 (Ryff & Keyes, 1995).

There were seven questions regarding psychological well-being stated negatively for the multiple linear regression data analysis. As a result, those questions were reversed. The process was to transform those seven responses to become recorded in a positive connotation. The seven statement questions were reversed to have results recorded in a positive connotation as follow: (1) I tend to be influenced by people with strong opinions, (2) Maintaining close relationships has been difficult and frustrating for me, (3) The demands of everyday life often get me down, (4) I have up trying to make big improvements or changes in my life a long time ago, (5) I sometimes feel as if I have done all there is to do in life, (6) I have not experienced many warm and trusting relationships with others, and (7) In many ways, I feel disappointed about my achievements in life.

The Satisfaction with Life scale had five items assessed how satisfied participants were across work, economic security, social activities/relationships, and living arrangement domains on a 1 (strongly disagree) to 7 (strongly agree) scale. Dummy coding was done with the

Satisfaction with Life scale items. If the respondents selected a one, two, or three, the dummy code given was a zero. If the respondents selected five, six, or seven, the dummy code given was a one. For those selecting a four, a random dummy code was given of a zero or a one.

The coefficient alpha for the scale has ranged from .79 to .89, indicating that the scale has high internal consistency (Pavot & Diener, 2008). For this research study, a Cronbach's alpha was conducted to examine the intern-item reliability for each scale used with the 163 participants. The alpha came at a higher level for the scales, QoL B.D. and Satisfaction with Life yet, consistent with the original form for the SPWB. Table 1 displays reliability statistics for each scale: QoL BD., SPWB, and SWL.

Table 1

Reliability Statistics

Scales	N of items	Cronbach's Alpha
QoL B.D.	56	.96
SPWB	18	.83
SWL	5	.90

Descriptive Statistic Information

The sample consisted of 128 (75.7%) participants identified as women and 29 (17.2%) identified as men. Table 2 presents the frequency and percentages for gender identification. The gender with the larger frequency were females/women. With a difference of almost 60 percent, the men had a little more than 17 percent participation.

Table 2

Descriptive Statistic: Gender

	Frequency	Percent
Women	128	75.7
Men	29	17.2
Transgender Women	3	.6
Transgender Men	0	0
Non-Binary	5	1.8
Not Listed	6	1.2
Total	163	100

Sexual orientation had 117 (71.8%) of the participants identifying as heterosexual/straight and 31 (19.0%) as bisexual, as seen in Table 3. Also indicating the three lowest frequencies, a total of 15 individuals reporting gay/lesbian, other (not listed) and preferring not to replay with a total percent of 9.2%.

Table 3

Descriptive Statistic: Sexual Orientation

	Frequency	Percent
Heterosexual/Straight	117	71.8
Gay/Lesbian	7	4.2
Bisexual	31	19.0
Other, Not Listed	4	2.5
Prefer not to replay	4	2.5
Total	163	

Noteworthy, relationships reported by participants included 70 (42.9%) as married and 20 (12.3%) being in a relationship. Individual also reported the following amounts as being single: a frequency of 40 and a percentage of 24.5 as seen in Table 4 below. Also noting below, individuals reported a total frequency of 15 stating being divorced or separated, equal to a total

of 9.2 %. This percentage reflected the lowest amount compared with the percentage of those being married or in a relationship.

Table 4

Descriptive Statistic: Relationship Status

	Frequency	Percent
Married	70	42.9
In a relationship	20	12.3
Single	40	24.5
Divorced	9	5.5
Separated	6	3.7
Widowed	2	1.2
Engaged	5	3.1
In an open relationship	2	1.2
In a domestic partnership	4	2.5
In a civil union	1	.6
Unspecified	4	2.5
Total	163	100

Most of the participants, 60 (36.8 %), were either Catholic or Protestant, as shown in

Table 5

Descriptive Statistic: Current Religion

	Frequency	Percent
Catholic	32	19.6
Protestant	28	17.2
Christian Orthodox	6	3.7
Jewish	3	1.8
Muslim	3	1.8
Sikh	0	0
Hindu	0	0
Buddhist	2	1.2
Atheist	16	9.8
Agnostic	21	12.9

Table 5 Continued

Descriptive Statistic: Current Religion

	Frequency	Percent
Something else	20	12.3
Nothing in particular, just Christian	21	12.9
Catholic	32	19.6
Do not know	11	6.8
Total	163	100

Participants responding to times attending religious services, 73 (44.8%) responded never, as seen in Table 6.

Table 6

Descriptive Statistic: Times Attending Religious Services

	Frequency	Percent
Never	73	44.8
Less than once a year	24	14.7
Once or twice a year	15	9.2
Several times a year	17	10.4
Once a month	6	3.7
2-3 Times a month	9	5.5
About once a week	14	8.6
Several times a week	5	3.1
Total	163	100

In reference to education attainment, most of the participants held degrees (n = 125; 76.7 %) beyond a high school diploma, as seen in Table 7. Interesting to note is that most participants reported having a graduate degree, 50 (30.7%).

Table 7

Descriptive Statistic: Education Attainment

	Frequency	Percent
High school or less	38	23.3
Associate's Degree	31	19
Bachelor's Degree	44	27
Graduate Degree	50	30.7
Total	163	100

A total of 70 (42.9%) of participants reported not being hospitalized followed very closely by a total of 67 participants reported being hospitalized for their mental illness/illnesses at least 1-3 times (41.1%) as showed below (Table 8).

Table 8

Descriptive Statistic: Times Being Hospitalized

	Frequency	Percent
None	70	42.9
1-3 times	67	41.1
4-7 times	16	9.8
8-11 times	4	2.5
More than 12	6	3.7
Total	163	100

For current treatment, 27.6 % individuals stated being in medication only. A very small number stated having no current treatment (n =9; 5.5 %) and only six participants responded have 'other' form of current treatment, 3.7 percentage.

Most participants engaged in the treatment of medications and psychotherapy (n = 89; 54.6%), as seen in Table 9.

Table 9

Descriptive Statistic: Current Treatment

	Frequency	Percent
Medication only	45	27.6
Psychotherapy/Counseling Only	14	8.6
Medication Psychotherapy/Counseling	89	54.6
Other	6	3.7
None	9	5.5
Total	163	100

Table 10 below indicates a higher percentage of educational engagement experiences reported by the sample population. The number of participants indicating currently being engaged in a paid or voluntary work experience was 94 (57.7%), and a greater amount indicated not currently being engaged in an educational experience, 110 (67.5%).

Table 10

Descriptive Statistic: Engagement in Educational and Paid/Voluntary Work Experience

	Frequency	Percent
Educational Experience Engagement		
Yes	53	32.5
No	110	67.5
Paid/Voluntary Work Experience Engagement		
Yes	94	57.7
No	69	42.3
Total	163	100

Demographic Dummy Coding

Multiple regression allows researchers to evaluate if a continuous dependent variable is a linear function or two or more independent variables (Rovai et al., 2013). Dummy coding can be used as independent variables are dichotomous variables coded as one to indicate the presence of some attribute and a zero to indicate the absence of that attribute (Davis, 2010). Multiple regression can incorporate a categorical variable as an individual variable, a dummy variable. For example, take the variable gender (male, female). A dummy variable could be maleness, where each participant is coded one if the participant is male and 0 if the participant is female. Alternatively, the dummy variable could be femaleness, where each participant is coded one if the participant is female and 0 for male. Only one of these dummy variables could be used as an independent variable. This prevents problems of multicollinearity (high intercorrelation of independent variables). Very high correlations violate the assumptions of no multicollinearity by increasing the standard error of the beta coefficients (Fox, 1997; Rovai et al., 2013).

Davis (2010) stated that it is possible to create complex dummy coding when variables have multiple categories. For this research study, dummy coding was done with ten categorical demographic independent variables (gender, sexual orientation, relationship status, religion, religion services engagement, education attainment, hospitalization history, treatment plan, educational and work engagement). For example, for gender identity, if a respondent identified themselves as a woman, the dummy code was Woman = 1, and Man, Transgender Women, Transgender Man, Non-Binary, and Not Listed were assigned a 0 each. Alternatively, if a respondent identified themselves as men, the dummy code was Man = 1, and Woman, Transgender Women, Transgender Man, Non-Binary, and Not Listed were assigned a 0 each.

For sexual orientation, respondents who stated being heterosexual, the dummy code was Heterosexual = 1, and gay/lesbian, bisexual, not listed, and prefer not to reply were assigned a 0 each. Alternatively, if a respondent was identified as gay/lesbian, the dummy code was 1, heterosexual, bisexual, not listed, and preferred not to replay coded with a 0. If a respondent was identified as bisexual, the dummy code was 1, and heterosexual, gay/lesbian, not listed, and prefer not to reply were coded with a 0. If respondent selected not listed, the dummy code one was assigned, and heterosexual, gay/lesbian, bisexual, and prefer not to reply were coded with a 0. Last, if the respondent selected prefer not to reply, the dummy code given was a 1, and the other categories were assigned with a dummy code of a 0 each. For relationship status, respondents who stated being married, the dummy code was Married = 1 and the other categories to include in a relationship, single, divorced, separated, widowed, engaged, in an open relationship, in a domestic relationship, in a civil union and unspecified were assigned a 0 each. Alternatively, if a respondent stated being in a relationship, the dummy code recorded was In a Relationship = 1, and all the other categories were given a 0. If the respondent was single, the dummy code was Single = 1, and all the other categories were assigned a 0. For divorced, the dummy code was Divorced = 1, and all the other categories were assigned a 0. For separated, dummy code was Separated = 1, and all the other categories were assigned a 0. The dummy code was Widowed = 1, and all the other categories were assigned a 0. For engaged, dummy code was Engaged = 1, and all the other categories were assigned a 0. In an open relationship, dummy code was In an Open Relationship = 1, and all the other categories were assigned a 0. For in a domestic partnership, the dummy code was In Domestic Partnership = 1, and all the other categories were assigned a 0. In a civil union, the dummy code was In a Civic Union = 1, and all

the other categories were assigned a 0 each. The last category for relationship status, unspecified, dummy code was Unspecified = 1, and all the other categories were assigned a 0 each.

For the categorical variable of current religion, those who indicated being Catholic, the given dummy code Catholic = 1, and all the other categories were assigned a 0. Again, if Protestant was selected, the given dummy code was Protestant = 1, and all the other categories were assigned a 0 each. Participants selecting Christian Orthodox, dummy code assigned was Christian Orthodox = 1, and all the other religion categories were assigned a 0 each. Respectively in the same pattern, for all the other religion categories left, dummy coding of 1 = to selected religion and a 0 = to each of the other not selected religions left (Jewish, Muslim, Sikh, Hindu, Buddhist, Atheist, Agnostic, Something Else, Nothing in Particular, just Christian, and Do Not Know).

Categorical variable, time attending religion services, for respondents indicated Never, the given dummy code Never = one and all the other categories were assigned a 0 each. If Less than Once a Year was selected, the given dummy code was Less than Once a Year = 1, and all the other categories were assigned a 0 each. Participants who selected Once or Twice a Year, dummy code assigned = 1, and all the other times attending religion services categories were assigned a 0. Respectively in the same pattern, for all the other times attending religion categories left, dummy coding of 1 = to selected attending time religion category and a 0 = to each of the other not selected time religions services left (Several times a year, Once a month, 2-3 times a month, about once a week, several times a week).

Education attainment variables were also dummy coded in the same manner as mentioned above. For respondents who indicated having a High School or Less, the given dummy code High School or Less = 1, and all the other categories (Associate's Degree, Bachelor's Degree,

Graduate Degree) were assigned a dummy code of 0 each. Alternatively, if the respondent indicated having an Associate's Degree, the dummy variable = 1 and all the other variables = 0. If the respondent indicated having a Bachelor's Degree, the dummy variable was = 1, and all the other variables = 0. For those indicating having a Graduate Degree, the dummy variable value = 1, and all the other variables' value was = 0.

Dummy coding was also used to account for the hospitalization times due to BD's mental health illness. For respondents who indicated None, the given dummy code None = 1, and all the other categories were assigned a 0 each. If 1-3 Times was selected, the given dummy code value was = 1, and all the other categories were assigned a 0 each. Participants who selected 4-7 Times, dummy code assigned = 1, and all the other hospitalization times categories were assigned a 0 each. Respectively in the same pattern, for the last two categories left (8-11 Times and More than 12), a dummy code of 1 was given if respondents selected either of the two categories mentioned and a value code of 0 to all the other remaining hospitalization times categories (None, 1-3 times, 4-7 times). The last categorical variable coded with a dummy value was the current treatment plan. For treatment plan modality, respondents stated being in Medication Only, the dummy code was Medication Only = 1, and all the other treatment plan categories (psychotherapy/counseling, medication & psychotherapy/counseling, other and none) were assigned a value of zero each. Alternatively, if a respondent stated treatment of Psychotherapy/Counseling, the dummy code recorded was Psychotherapy/Counseling = 1, and all the other categories were given a 0. If the respondent was identified as being in Medication & Psychotherapy/Counseling, the dummy code was Medication & Psychotherapy/Counseling, = 1, and all the other categories were assigned a 0. For respondents who indicated current treatment as Other, the dummy code was = 1, and all the other categories were assigned a 0. Lastly, for

those respondents who indicated being under no treatment (None), the dummy code was None = 1, and all the other treatment plan categories were assigned a dummy code value of 0. As part of the demographic variables, two questions required a 'Yes' or a 'No' response, engagement in any educational experience, and paid or voluntary work experience. As part of dummy coding, if respondents answered a 'Yes' to any of these two questions, a dummy code of a one was assigned. On the contrary, if respondents answered a “No' to any of these two questions, a dummy code of zero was assigned. For this study, multiple regression incorporated categorical variables as individual variables, a dummy variable. Overall, dummy coding was used due to complex variables having multiple categories (Davis, 2010).

Survey Scales of Measure

The descriptive statistics for the Quality of Life in Bipolar Disorder (QoL.BD.) scale, the Psychological Well-Being-Short Form (SPWB-SF) scale, and the Satisfaction with Life (SWL) scale are presented in Table 11. The number of participants (163), the mean (M) and the standard deviation (SD) are depicted below.

Table 11

Descriptive Statistics Scales Measures

	N	*M*	*SD*
QoL.BD Total	163	161.53	36.13
SPWB Total	163	68.35	13.74
SWL Total	163	19.54	8.15

Note. N = Number of Participants, M = Mean, SD = Standard Deviation

Scale Items Rating of Importance: QoL, SPWB, and SWL

The participants ranked the following constructs as the top five most important traits for them about their overall QoL: (1) feeling safe at home environment, (2) having enough money for basic needs, (3) feeling others have allowed their independence, (4) traveling around freely (e.g., driving, using public transport), and (5) being able to share their feelings or problems with a friend. Sequentially, the participants ranked the following constructs as the five lowest traits for them in relation with their overall QoL: (1) been content with their sex life, (2) waking up feeling refreshed, (3) having no difficulty with memory, (4) been organized around home, and (5) having the right amount of exercise. Table 12 presents the descriptive statistics for QoL B.D. Scale Items Ranking.

Table 12

Descriptive Statistics QoL B.D. Scale Items Ranking

Questions (High to Low)	*N*	*M*	*SD*
42. Felt safe in my home environment	163	4.09	.990
29. Had enough money for basic needs	163	3.78	1.24
44. Felt others have allowed my independence	163	3.73	1.13
43. Traveled around freely (e.g., driving, using public transport)	163	3.69	1.29
24. Been able to share feelings or problems with a friend	163	3.33	1.28
21. Enjoyed spending time with other people	163	3.31	1.22
30. Had enough money for extras	163	3.31	1.42
26. Expressed my spirituality as I wish	163	3.27	1.01
23. Had meaningful friendships	163	3.26	1.25
47. Had a clear idea of what I want and don't want	163	3.26	1.26
22. Been interested in my social relationships	163	3.25	1.17
27. Practiced my spirituality as I wish	163	3.25	1.04
17. Enjoyed my leisure activities	163	3.23	1.10
19. Had fun during my leisure activities	163	3.23	1.08
45. Had a strong sense of self	163	3.22	1.24

Table 12 Continued

Descriptive Statistics QoL B.D. Scale Items Ranking

	Questions (High to Low)	*N*	*M*	*SD*
53.	Enjoyed my educational activities	163	3.22	1.11
37.	Felt respected	163	3.21	1.13
38.	Felt accepted by others	163	3.21	1.22
50.	Met demands at work	163	3.20	1.20
52.	Been reliable at work	163	3.19	1.24
51.	Been satisfied with the quality of my work	163	3.18	1.19
18.	Been interested in my leisure activities	163	3.17	1.17
32.	Had no difficulties with debts	163	3.14	1.44
9.	Felt happy	163	3.09	1.09
48.	Had control over my life	163	3.09	1.23
49.	Been confident in my abilities at work	163	3.08	1.29
11.	Felt able to cope	163	3.06	1.18
40.	Felt able to cope with stigma	163	3.06	1.21
3.	Felt physically well	163	3.03	1.14
10.	Enjoyed things as much as I usually do	163	3.02	1.14
55.	Performed to my usual standards educationally	163	3.02	1.11
25.	Been satisfied with the spiritual side of my life	163	3.01	1.02
31.	Felt secure about my current financial situation	163	3.00	1.50
41.	Had a sense of freedom	163	3.00	1.21
46.	Had a stable sense of what I am really like	163	2.97	1.26
54.	Felt confident about finishing my educational activities	163	2.95	1.19
16.	Made plans without difficulty	163	2.93	1.19
8.	Kept a routine in my sleep-wake schedule	163	2.92	1.32
13.	Thought clearly	163	2.92	1.14
20.	Expressed my creativity	163	2.92	1.20
56.	Organized my educational activities adequately	163	2.91	1.12
28.	Kept routine in my spiritual life	163	2.87	1.03
39.	Felt as worthwhile as other people	163	2.85	1.25
7.	Had about the right amount of sleep for me	163	2.85	1.28
1.	Had plenty of energy	163	2.83	1.17
33.	Done my daily household chores	163	2.80	1.19
36.	Kept my home clean	163	2.75	1.18
6.	Had no problems getting out of bed	163	2.72	1.32
14.	Had good concentration	163	2.72	1.17
35.	Kept my home tidy	163	2.69	1.17
12.	Felt emotionally balanced	163	2.58	1.20

Table 12 Continued

Descriptive Statistics QoL B.D. Scale Items Ranking

Questions (High to Low)		*N*	*M*	*SD*
4.	Been content with my sex life	163	2.56	1.20
5.	Woken up feeling refreshed	163	2.55	1.23
15.	Had no difficulties with memory	163	2.55	1.19
34.	Been organized around my home	163	2.55	1.17
2.	Had the right amount of exercise for me	163	2.55	1.17

Note. N = Number of Participants, M = Mean, SD = Standard Deviation

Table 13 (below) presents the descriptive statistics for SPWD Scale Items Ranking. The scale items questions below are placed from high to low ranking. The participants ranked the following constructs from the SPWB Scale as the top five most important traits for them in relation with their psychological well-being:

(1) For me, life has been a continuous process of learning, changing, and growth.

(2) I think it is important to have new experiences that challenge how you think about yourself and the world.

(3) People would describe me as a giving person, willing to share my time with others.

(4) I sometimes feel as if I have done all there is to do in life.

(5) I have confidence in my opinions, even if they are contrary to the consensus. Note, the three least important traits for respondents included the following:

(4) I live life one day at a time and don't really think about the future.

(5) Maintaining close relationships has been difficult and frustrating for me, and

(8) the demands of everyday life often get me down.

Table 13

Descriptive Statistics SPWB Scale Items Ranking

Questions (High to Low)	*N*	*M*	*SD*
9. For me, life has been a continuous process of learning, changing, and growth.	163	4.90	1.19
3. I think it is important to have new experiences that challenge how you think about yourself and the world.	163	4.85	1.19
11. People would describe me as a giving person, willing to share my time with others.	163	4.71	1.30
16. I sometimes feel as if I have done all there is to do in life.	163	4.39	1.57
7. I have confidence in my opinions, even if they are contrary to the general consensus.	163	4.27	1.52
13. I judge myself by what I think is important, not by the values of what others think is important.	163	4.24	1.39
12. I like most aspects of my personality.	163	3.98	1.43
15. I gave up trying to make big improvements or changes in my life a long time ago.	163	3.94	1.56
2. In general, I feel I am in charge of the in which I live.	163	3.79	1.47
17 I have not experienced many warm and trusting relationships with others.	163	3.70	1.79
10. Some people wander aimlessly through life, but I am not one of them.	163	3.67	1.57
1. I tend to be influenced by people with strong opinions.	163	3.53	1.50
14. I am quite good at managing the many responsibilities of my daily life.	163	3.41	1.47
6. When I look at the story of my life, I am pleased with how things have turned out.	163	3.20	1.62
18. In many ways, I feel disappointed about my achievements in life.	163	3.15	1.72
4. I live life one day at a time and don't really think about the future.	163	3.12	1.63
5. Maintaining close relationships has been difficult and frustrating for me.	163	2.96	1.65
8. The demands of everyday life often get me down.	163	2.53	1.26

The participants ranked item number four as the topmost important statement and item five as the least important one. Table 14 presents the descriptive statistics for SWL Scale Items Ranking.

Table 14

Descriptive Statistics SWL Scale Items Ranking

Questions (High to Low)	*N*	*M*	*SD*
4. So far, I have gotten the important things in my life.	163	4.49	1.87
2. The conditions of my life are excellent.	163	4.08	1.95
3. I am satisfied with my life.	163	3.90	1.87
1. In most ways, my life is close to my ideal.	163	3.79	1.90
5. If I could live my life over, I would change almost nothing.	163	3.28	1.99

For this study, we were interested in predicting demographic variables (age, gender, sexual orientation, relationship status, religion, religion services engagement, education attainment, income level, years of diagnosis, hospitalization history, treatment plan, educational and work engagement) to find relationship strengths with the dependent variable, the QoL of people with bipolar disorder. Multiple linear regression analysis was used to determine the relationship between correlations. With multiple regression analysis, with five predictors, the linear combination of the regression equation is as follows:

$$\hat{Y} \equiv \hat{Y} = B_1X_1 + B_2X_2 + B_3X_3 + B_4X_4 + B_5X_5 + B_0$$

Here *B1* through *B5* describes the slope for the five independent variables as an additive constant. The values are calculated to ascertain the relationship with the dependent variable (Y). Furthermore, the multiple regression (*R*) is a strength-of-relationship indicating the degree that

the X variable predicts Y (Rovai et al., 2014). This research found these independent demographic variables to be significant with QoL, the dependent variable. Tables 15-24 show the Summary of ANOVA, Stepwise Regression Models, as well as the Model Summary Stepwise Regression Analysis for Demographic Factors Predicting quality of life.

Research Question Number One: What demographic factors are associated with the QoL of people with bipolar disorder?

For research question number one, demographic questions were regressed on the dependent variable, the QoL of individuals with bipolar disorder. This research study found that the independent variables were significant with the QoL of the individuals with bipolar disorder. The multiple linear regression results suggest that individuals with a high school or less education are less likely to have a higher quality of life. Conversely, those with a higher educational level (Graduate Degree) and higher income level were more likely to have a higher quality of life. The relationship between the QoL total and High School or Less education was significant: $R^2 = .12$, adjusted $R^2 = .11$, $F(1,147) = 20.72$, $P < .000$**.

Furthermore, the relationship between the QoL total and the four demographic variables (High School or Less, Graduate Degree, Income, Educational Activities) was also significant: $R^2 = .26$, Adjusted $R^2 = .24$, $F(1,144) = 6.56$, $P < .011$** (see the following Tables).

Table 15

ANOVA Summary Regression Analysis for Demographic Factors Predicting QoL

Model		Sum of Square	df	Mean Square	F	Sig
1.	Regression	22775.512	1	22775.51	20.72	.00[b***]
	Residual	161551.454	147	1098.98		

Table 15 Continued

ANOVA Summary Regression Analysis for Demographic Factors Predicting QoL

Model		Sum of Square	df	Mean Square	F	Sig
	Total	184326.966	148			
2.	Regression	34577.832	2	17288.91	16.85	.00[c***]
	Residual	149749.135	146	1025.67		
	Total	184326.966	148			
3.	Regression	42332.702	3	14110.90	14.41	.00[d**]
	Residual	141994.265	145	979.27		
	Total	184326.966	148			
4.	Regression	48517.703	4	12129.42	12.86	.00[e**]
	Residual	135809.263	144	943.12		
	Total	184326.966	148			
5.	Regression	52894.731	5	10578.94	11.51	.00[f*]
	Residual	131432.236	143	919.10		
	Total	184326.966	148			

* $p < .05$, ** $p < .01$, *** $p < .001$

Dependent Variable: QoL

1. Predictors: (Constant), High school or less
2. Predictors: (Constant), High School or less, Graduate Degree
3. Predictors: (Constant), High School or less, Graduate Degree, Income
4. Predictors: (Constant), High School, Graduate Degree, Income, Educational Activities
5. Predictors: (Constant), High School, Graduate, Income, Educational Activities, Jewish

Table 16

Summary of Stepwise Regression Analysis for Demographic Factors for Model 1-2 Predicting QoL (N =163)

	Model 1			Model 2		
Variables	*B*	*SE*	*β*	*B*	*SE*	*β*
High school or less	-28.62	6.29	-.35***	-21.83	6.39	-.27***
Graduate Degree				21.15	6.23	.27***
R^2		.12***			.05 ***	
F change in R^2		20.72			11.51	

*p<.05, **P<.01, p<.001***

Table 17

Summary of Stepwise Regression Analysis for Demographic Factors for Model 3-5 Predicting QoL (N =163)

	Model 3			Model 4			Model 5		
Variables	*B*	*SE*	*β*	*B*	*SE*	*β*	*B*	*SE*	*β*
High school or less	-20.94	6.26	-.26***	-19.14	6.18	-.24***	-19.14	6.10	.24***
Graduate degree	18.77	6.15	.24***	17.09	6.07	.22***	16.11	6.01	.20***
Income	.00	.00	.21**	.00	.00	.23**	.00	.00	.22**
Educational Act.				.5	5.60	.19**	4.52	5.53	.19**
Jewish							-38.80*	17.78	-.16*
R^2	.04**			.03**			.06*		
F change in R^2	7.92			6.56			4.76		

*p<.05, **P<.01, p<.001***

Table 18 indicates the significant demographic independent variables that were regressed into QoL accounted for 28.7% of the variance in QoL. Earning a high school education or less accounted for 12.4% of the total. In turn, earning a high school education or less and a graduate

degree accounted for 6.4% of QoL variance. Earning a high school education or less plus a graduate degree and income factor accounted for 4.2%. Sequentially, having a high school or less education, a graduate degree, income level factor along with educational activities engagement, accounted for 3.3% of the total QoL variance. Lastly, 2.4% was accounted for from having a high school or less education, a graduate degree, income level, educational activities engagement, and Jewish religious practices.

Table 18

Model Summary Stepwise Regression Analysis for Demographic Factors Predicting QoL

Model	R	R Square	Adjusted R^2	Std. Error of Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.35[a]	.12	.11	33.15	.12	20.72	1	147	.00***
2	.433	.18	.17	32.02	.06	11.50	1	146	.00***
3	.479	.23	.21	31.29	.04	7.91	1	145	.00**
4.	.513	.26	.24	30.71	.03	6.55	1	144	.01**
5.	.536	.28	.26	30.31	.02	4.76	1	143	.03*

* p < .05, ** p < .01, *** p < .001

Dependent Variable:

QoL Predictors: (Constant), High school or less

Dependent Variable: QoL

1.Predictors: (Constant), High school or less

2.Predictors: (Constant), High School or less, Graduate Degree

3.Predictors: (Constant), High School or less, Graduate Degree, Income

4.Predictors: (Constant), High School, Graduate Degree, Income, Educational Activities

5.Predictors: (Constant), High School, Graduate, Income, Educational Activities, Jewish

Research Question Number Two: **Is there a significant relationship between psychological well-being and QoL among individuals with bipolar disorder?**

The correlation coefficient for psychological well-being and QoL was significant, r =.73, p<.01. Results indicated a high relationship between the individuals' psychological well-being and their overall QoL. For this research question, the six subscales for the Psychological Well-Being Short Form (SPWB) Scale were regressed on the dependent variables QoL.B.D. The interest in research question two was to find significant relationships between the subscales from the SPWB Scale (life purposes, personal growth, positive relationships with others, autonomy, environmental mastery, and self-acceptance) and the dependent variable, the QoL of people with bipolar disorder.

The multiple linear regression results showed three specific psychological constructs. Environmental Mastery, Self-Acceptance and Autonomy were the character traits individuals had and more likely to have a higher quality of life. The relationship between the QoL total and Environmental Mastery was significant: $R^2 = .61$, adjusted $R^2 = .60$, $F(1,161) = 246.61$, $P < .000$. Furthermore, the relationship between the QoL total and the SPWB two subscales, Environmental Mastery and Self-Acceptance was also significant: $R^2 = .67$, Adjusted $R^2 = .66$, $F(1,160) = 31.17$, $P < .000$. Lastly, the relationship between the three SPWB subscales (Environmental Mastery, Self-Acceptance & Autonomy) was significant: $R^2 = .68$, Adjusted $R^2 = .67$, $F(1,159) = 5.09$, $P < .025$ (see the following Tables).

Table 19

ANOVA Summary Regression Analysis for Psychological Well-Being Factors Predicting QoL

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	127928.58	1	27928.58	246.60	.00[b***]
	Residual	83520.04	161	518.75		

Table 19 Continued

ANOVA Summary Regression Analysis for Psychological Well-Being Factors Predicting QoL

Model		Sum of Squares	df	Mean Square	F	Sig.
	Total	211448.62	162			
2	Regression	141545.46	2	70772.73	161.99	.00c***
	Residual	69903.15	160	436.89		
	Total	211448.62	162			
3	Regression	143711.75	3	47903.91	112.44	.00d***
	Residual	67736.86	159	426.01		
	Total	211448.62	162			

* p < .05, ** p < .01, *** p < .001

Dependent Variable: QoLTotal

b. Predictors: (Constant), Environmental Mastery

c. Predictors: (Constant), Environmental Mastery, Self-Acceptance

d. Predictors: (Constant), Environmental Mastery, Self-Accept, Autonomy

Table 20

Summary of Stepwise Regression Analysis for Psychological Well-Being Factors Model Predicting QoL (N =163)

	Model 1			Model 2			Model 3		
Variables	*B*	*SE*	*β*	*B*	*SE*	*β*	*B*	*SE*	*β*
Environmental Mastery	8.43	.54	.78**	6.47	.61	.60**	6.36	.60	.59**
Self-Acceptance				3.0	.54	.31**	2.67	.55	.28**

Table 20 Continued

Summary of Stepwise Regression Analysis for Psychological Well-Being Factors Model Predicting QoL (N =163)

	Model 1			Model 2			Model 3		
Variables	*B*	*SE*	*β*	*B*	*SE*	*β*	*B*	*SE*	*β*
Autonomy							1.21	.5	.11**
R^2	.61**			.21**			.61**		
F change in R^2	.60			.67			.67		

* p < .05, ** p < .01, *** p < .001

Table 21, the Model Summary Stepwise Regression Analysis for Psychological Well-Being Factors, indicates the predictions relationships. The significant psychological well-being independent variables that were regressed into QoL accounted for 68% of QoL variance. The Environmental Mastery accounted for 60.5% of the total. Environmental Mastery and Self-Acceptance accounted for 6.4% of the total variance in QoL. Environmental Mastery, Self-Acceptance, and Autonomy accounted for 1.1%.

Table 21

Model Summary Stepwise Regression Analysis for Psychological Well-Being Factors Predicting QoL

Model	R	R Square	Adjusted R^2	Std. Error of Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.77[a]	.60	.60	22.77	.60	246.60	1	161	.00***
2	.81[b]	.66	.66	20.90	.06	31.16	1	160	.00***
3	.82[c]	.68	.67	20.64	.01	5.08	1	159	.02 *

* p < .05, ** p < .01, *** p < .001

a. Predictors: (Constant), Environmental Mastery

b. Predictors: (Constant), Environmental Mastery, Self-Acceptance

c. Predictors: (Constant), Environmental Mastery, Self-Accept, Autonomy

Research Question Number Three: Is there a significant relationship between positive psychology practices and QoL among individuals with bipolar disorder?

For research question number three, the Satisfaction with Life (SWL) scale was correlated with the dependent variables QoL B.D. total. The correlation coefficient for positive psychology practices and QoL was significant, $r = .67$, $p<.01$. Results indicated a moderate relationship between the individuals' positive psychological practices and their overall QoL. The multiple linear regression results suggest that those individuals indicating being in strong agreement that the condition of their life are excellent and that they have gotten the important things they wanted in life are two positive psychology practices that are more likely to have a higher quality of life.

The relationship between the two statements: 'The conditions of my life are excellent and 'So far, I have gotten the important things I want in life.' and the QoL total was significant: $R^2 = .35$, adjusted $R^2 = .34$, $F(1,160) = 6.81$, $P < .010$ (see the following Tables).

Table 22

ANOVA Summary Regression Analysis for Satisfaction with Life Factors Predicting QoL

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	67528.81	1	67528.81	75.54	.00[b***]
	Residual	143919.81	161	893.91		
	Total	211448.62	162			
2	Regression	73403.69	2	36701.84	42.53	.00c**
	Residual	138044.92	160	62.78		

Table 22 Continued

ANOVA Summary Regression Analysis for Satisfaction with Life Factors Predicting QoL

Model		Sum of Squares	df	Mean Square	F	
	Total	211448.62	162			
3	Regression	76871.75	3	25623.91	30.27	.00d*
	Residual	134576.87	159	46.39		
	Total	211448.62	162			

* p < .05, ** p < .01, *** p < .001

Dependent Variable: QoLTotal

b. Predictors: (Constant), Life Cond. Excellent

c. Predictors: (Constant), Life Cond. Excellent,
Got Import Things in Life

d. Predictors: (Constant), Life Cond. Excellent,
Got Import. Things in Life, If Live Over Change Almost Nothing

Table 23

Summary of Stepwise Regression Analysis for Satisfaction with Life Factors for Model 1-3 Predicting QoL (N =163)

	Model 1			Model 2			Model 3		
Variables	*B*	*SE*	*β*	*B*	*SE*	*β*	*B*	*SE*	*β*
Life Cond. Excellent	40.83	4.70	.57***	32.7	5.57	.45***	28.26	5.94	.39***
Got Import Things in Life				15.08	5.7	.20***	13.29	5.79	.18**
Things in Life,									

Table 23 Continued

Summary of Stepwise Regression Analysis for Satisfaction with Life Factors for Model 1-3 Predicting QoL (N =163)

	Model 1			Model 2			Model 3		
Variables	*B*	*SE*	*β*	*B*	*SE*	*β*	*B*	*SE*	*β*
If Live Over Change Almost Nothing							11.18	5.52	.15*
R^2		.32***			.03**			.01*	
F change in R^2		75.54			6.81			4.10	

*p<.05, **P<.01, p<.001***

Table 24 indicates the Satisfaction with Life Factors predicting relationships of the independent variables. The significant independent variables for Satisfaction with Life that were regressed into QoL accounted for 36% of QoL variance. The Condition of My Life is Excellent accounted for 31.9% of the total. The Condition of My Life is Excellent, and I have Gotten Important Things in Life accounted for 2.8% of QoL variance. The Condition of My Life is Excellent, I have Gotten Important Things in Life, and If I Could Live Over, I would Change Almost Nothing accounted for 1.7%.

Table 24

Model Summary Stepwise Regression Analysis for Satisfaction with Life Factors Predicting QoL

Model	R	R Square	Adjusted R^2	Std. Error of Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.56[a]	.31	.31	29.89	.31	75.54	1	161	.00***
2	.58[b]	.34	.33	29.37	.02	6.89	1	160	.01**
3	.60[c]	.36	.35	29.09	.01	4.09	1	159	.04*

Table 24 Continued

Model Summary Stepwise Regression Analysis for Satisfaction with Life Factors Predicting QoL

*p<.05, **P<.01, p<.001***
Dependent Variable: QoL Total

a. Predictors: (Constant), Life Cond. Excellent
b. Predictors: (Constant), Life Cond. Excellent, Got Import Things in Life
c. Predictors: (Constant), Life Cond. Excellent, Got Import. Things in Life, If Live Over Change Almost Nothing

The Pearson product-moment correlation coefficient (r) assesses the degree to the degree variables are linearly related in a sample. The significance test for *r* to evaluate whether there is a linear relationship in a population. The *r* coefficient has values between -1 to +1 and with a value of zero indicating no correlation (Green & Salkind, 2013). A positive correlation indicates a higher score on well-being and, in turn, is associated with a higher QoL score. Conversely, a negative correlation found on well-being scores would be associated with a lower QoL.

In sum, a positive sign indicates a positive correlation, while a negative sign denotes a negative correlation. A zero correlation indicates no relationship. As the correlation coefficient moves toward either -1 or +1, the relationship gets stronger until there is a perfect correlation at extreme. Perfect correlation is referred to as singularity (Green & Salkind, 2013). A common interpretive guide that is often used to describe the strength of statistically significant relationships (i.e., $p \leq .5$) is the one proposed by Jurs et al. (1998): little if any relationship < .30, low relationship = .30 to < .50, moderate relationship = .50 to < .70, high relationship = .90 and above. Multiple regression requires data to meet assumptions about collinearity and multicollinearity (Green & Salkind, 2013). Collinearity means the condition when a very strong correlation exists between two predictors.

Whenever more than two predictors have very strong correlations, the result of this existing condition is called multicollinearity (Meyers et al., 2017). Very high correlations violate the assumptions of no multicollinearity by increasing the standard error of the beta coefficients (Fox, 1997; Rovai et al., 2013).

A crucial step when using multiple regression analysis is to check for assumptions. Multiple regression assumes linearity of the model, normality of distribution among variables, variable independence, and constant variance across all levels of the predicted variables or homoscedasticity to avoid Type I and II errors. In addition, multiple regression requires that there are no strong correlations between two or more predictors (Rovai et al., 2013).

Furthermore, data analysis meeting assumptions about collinearity and multicollinearity must be accounted for through the Variance Inflation Factor, VIF (Meyers et al., 2017). The variance inflation factor (reciprocal of tolerance) quantifies how much of the variance is inflated and reflects the presence or absence of multicollinearity. The VIF has a range of 1 to infinity. When the VIF is high, there is a problem of multicollinearity and instability of the *b* and beta coefficients. A common cutoff threshold is a VIF value of .10 with a tolerance of .1 (Rovai et al., 2013). In multiple regression, tolerance is used as an indicator of multicollinearity. Tolerance is estimated by 1 - *R* 2, where *R* 2 is calculated by regressing the independent variable of interest onto the remaining independent variables included in the multiple regression analysis (Green & Salkind, 2013). All other things equal, researchers desire higher levels of tolerance, as low tolerance levels are known to adversely affect the results associated with multiple regression analysis (Rovai et al., 2013). This prevents problems of multicollinearity (high intercorrelation of independent variables). Very high correlations violate the assumptions of no multicollinearity by increasing the standard error of the beta coefficients (Fox, 1997; Rovai et al., 2013).

For this research study, multiple regression analysis did meet the assumptions of data on collinearity for the dependent variable QoL. There were no issues of collinearity and multicollinearity. Tables 25 shows the strength of associations using Pearson product-moment and determine the strength and direction of the linear relationship between two continuous variables (Green & Salkind, 2013). Linear relationships are depicted with scatterplots representing values around a straight line. The higher the linear correction, the tighter is the clustering around the straight line. Weak relationships are represented by widely scattered values, as shown in Figures 1 (QoL & Psychological Well-Being, SPWB) and 3 (Simple Scatter Plot with Fit Line: QoL and Psychological Well-Being, SPWB) below. Table 25 indicates the Pearson Correlations Between QoL B.D, SPWB, and SWL.

Table 25

Pearson Correlations Between QoL.BD., SPWB, and SWL (N = 163)

	QoL.BD.	SPWB	SWL
QoL.BD. Total	.72**		
SPWB Total		.66**	
SWL Total			.66**

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

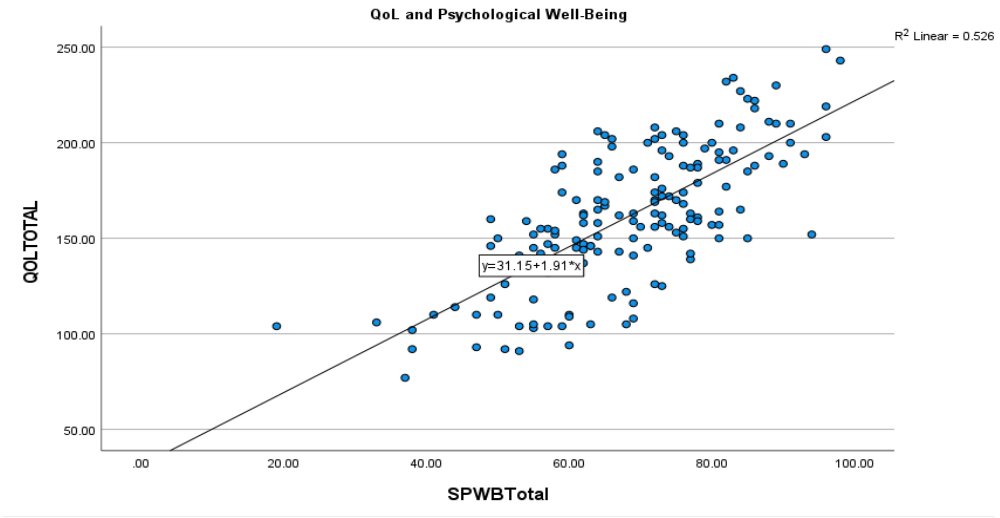

Figure 1

Simple Scatter Plot with Fit Line: QoL & Psychological Well-Being (SPWB) Scale

Figure 2

Simple Scatter Plot with Fit Line: QoL and Satisfaction with Life (SWL)

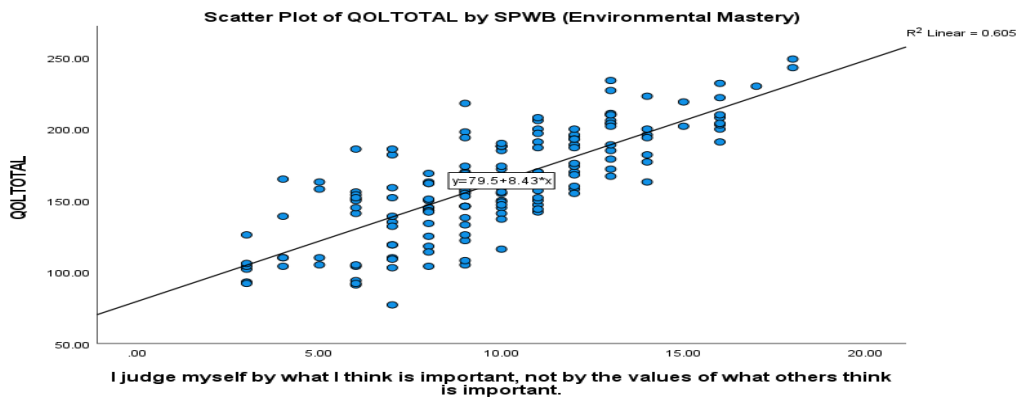

Figure 3

Simple Scatter Plot with Fit Line: QoL and Psychological Well-Being (SPWB)

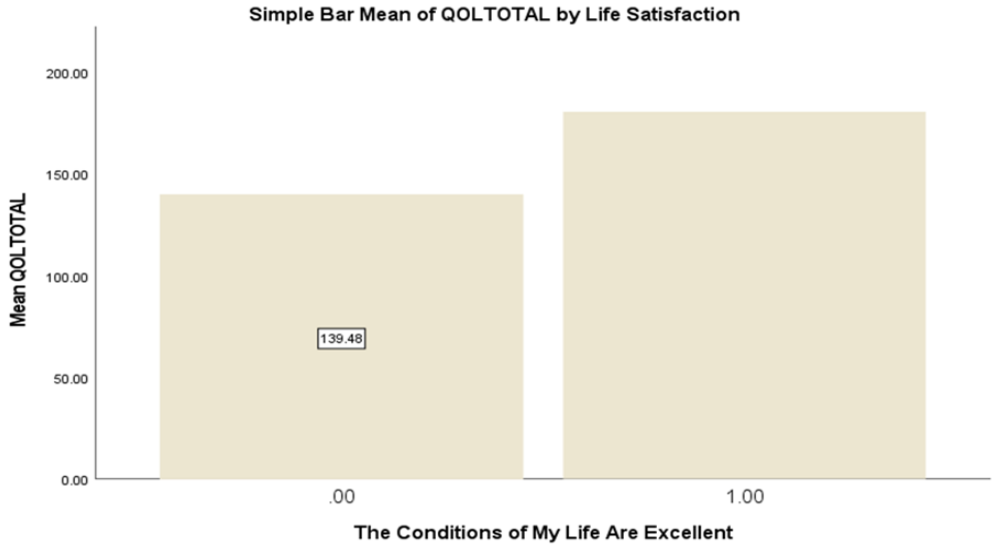

Figure 4

Simple Bar Mean Graph: QoL and Satisfaction with Life (SWL)

CHAPTER V

DISCUSSION

This chapter presents the limitations and discussion of the findings of this study. The overall impact of the QoL of people with BD was assessed to determine if there was a relationship between psychological well-being, positive psychological practices, and specific demographic variables.

Limitations of the Study

There were limitations to this study. An important limitation of this research was the lack of random sampling—the lack of random sampling led to the inability to generalize. Volunteer sampling was done to reach out to representative sampling through social media, according to Mills and Gay (2015). Another limitation was the volunteer sampling self-report measures. Self-reported answers may be exaggerated as research participants may respond to items because they are embarrassed to reveal private details. In addition, the responses to the measures in this study might reflect the various biases of the participants.

This Study in Comparison with Current Research Studies

For research replication and consistent to similar findings with this research, results from other literature reviews are diverse. The Wingo et al. (2010) study stated that more education predicted a higher QoL. This multiple logistic regression study concluded that more education

(p= 0.006) and being married (p = 0.045) were associated with independent functional recovery among individuals with bipolar disorder. Barbosa et al. (2018) performed a similar regression analysis among a population of bipolar disorder. The results indicated that the predictors of cognitive performance in BD and the role of education, was significant to clinical and overall performance and recovery among individuals with bipolar disorder.

Other studies have also indicated similar results among patients with BD who have deficits in learning and a lower quality of life (Cullen et al., 2016), poor cognitive performance associations with years of education (Solé et al., 2017), higher education correlates with reduced cognitive reserve in bipolar disorder (Lin et al. 2020), and length of education was significantly correlated with the QoL in the BD group (Lee et al., 2017). This study had findings congruent with the above studies in that those participants who had only a high school degree had a negative relationship with QoL. They significantly reported lower QoL than those with an associate's degree or higher. Similarly, in this study those with graduate degrees had a significantly higher relationship with QoL than any degree.

The absence of well-being creates conditions of vulnerability to life challenges. To endure recovery, individuals must embrace positive functioning (Ryff & Keyes, 1995). Aligned with such concepts, other research studies have concluded that the absence of psychological well-being had risk factors for depression, relapse, and recurrence (Wood & Joseph, 2010). In sum, growing research studies conclude that QoL is an important indicator of well-being and personal recovery (Michalak et al., 2005; Ruini & Fava, 2012). Determinants of subjective well-being in people with psychosis or bipolar spectrum, the results of a regression analyses showed that unemployment (β = -.16, p < .001), lack of social support (β = -.20, p < .001), distressing beliefs (β = -12, p < .004), and poorer coping (β = -43, p < .001) were associated with reduced

subjective well-being, together accounting for 43% of the variance well-being (Broyd et al., 2016). This study found that those participants who had higher ratings of environmental mastery, self-acceptance and autonomy reported having a significantly higher relationship with QoL.

These are some similar studies to this research study. A longitudinal research study to test whether the absence of positive well-being forms risk factors for depression, the results concluded that people with a low positive well-being were 7.16 times more likely to be depressed ten years later (Wood & Joseph, 2010). For this study, positive psychological well-being included measures of environmental mastery, self-acceptance and autonomy were significantly related to QoL.

Other research studies replicating similar results between positive psychological practices, life satisfaction measures, and QoL among individuals with BD. According to the Palamattathil and De Guzman's (2017) study, results showed a significant decrease in depression and increased QoL among women with BD II through Mindfulness-Based Cognitive Theory and Stress-Buffering Model of Social Support. Other research studies indicate overall effects.

The following are the results of different research findings: low QoL in patients with BD was associated with length of illness (early-onset) and lack of social support (Gutiérrez-Rojas et al., 2008); increased resilience factors through personality traits such as high extraversion and openness to experience (Galvez et al., 2011), positive psychology interventions led to more significant improvement in positive affect and optimism with large effect sizes (Celano et al., 2020) and lastly, linear regression findings showed that the extent to which patients with BD updated their beliefs in response to positive information was predictive to relapse. In other words, individuals with a positive outlook were linked to a more favorable course of bipolar illness (Ossola et al., 2020).

Congruent with the above findings and other research studies, this study found the following life satisfaction items with a significant relationship with QoL: 1) The Condition of My Life is Excellent, 2) I have Gotten Important Things in Life and 3) If I Could Live Over, I would Change Almost Nothing.

Similar to other studies, this study found positive aspects of psychological well-being and life satisfaction necessary to QoL. Other studies have shown the significant effects of relationships among different variables (psychological well-being, life satisfaction, positive psychology traits) and the overall QoL among individuals with mental disorders other than bipolar disorder. Some of these findings include the following: character strengths predicting resilience, optimism, and social support (Martínez-Martí & Ruch , 2017; Lee et al., 2017), personality traits such as hope, self-stigma, and life experiences defining an individual's QoL (Vrbova et al., 2017), and social support, optimism, self-compassion, enthusiasm, self-efficacy, and positive rumination as positive predictors of quality of life (Gutierrez-Rojas et al. 2008; Huta & Hawley, 2010; Kraiss et al., 2015; Sergeant & Mongrain, 2015; Tol et al., 2015).

Research Studies with Different Results

Even though other research studies have shown significant effects associated with positive well-being, satisfaction with life interventions and QoL, some research studies also indicated opposite results. Geerling et al.'s (2020) meta-analysis on the effects of positive psychology interventions found no significant effects on both well-being in psychopathology for positive psychology interventions compared to the control conditions. Another study demonstrated no differences with euthymic patients with BD in the QoL and cognitive performance (Dias et al., 2008).

Results from a 2008 multiple predictor variables study demonstrated that functional capacity variables were not associated with subjective or objective QoL. Conclusions showed that treatment to improve QoL in a serious mental illness should focus on negative and depressive symptoms (Narvaez et al., 2008). These studies indicate that this study should be replicated and refined to gain a greater understanding of what and how factors can positively impact QoL of people with a serious mental illness such as BD and other mental illnesses.

CHAPTER VI

SUMMARY AND CONCLUSIONS

Bipolar disorder remains a mental health condition with a continuous need for further study. The importance of this population striving for personal recovery remains vital for their overall well-being. Understanding the role of positive well-being, satisfaction with life factors, and positive psychology features in BD outcomes endure crucial components for the impact of having mentally and physically healthy lifestyles, social integration, and reporting higher quality of life. Factors affecting the overall QoL of these individuals indicate BD can have a severe, often enduring, dysfunctional impact on daily lives. This study examined the effects of psychological well-being in relationship with the QoL of people with bipolar disorders. More specifically, results from this study explored the significant relationships between positive well-being and positive psychology measures on the QoL of people with bipolar disorder. The following research questions were used to guide and address this research study:

1. What demographic factors are associated with the QoL of people with bipolar disorder?
2. Is there a significant relationship between psychological well-being and QoL among individuals with bipolar disorder?
3. Is there a significant relationship between positive psychology practices and QoL among individuals with bipolar disorder?

Descriptive statistics through multiple linear regression and correlation analyses were used to describe the sample, followed by several statistical analyses to test each research hypothesis. Computer software, IBM SPSS Statistics Version 27 (2020), was used to analyze data. This research study used volunteer sampling. A total of 163 individuals self-identified with a diagnosis of BD completed the online survey posted on social media support groups' websites (Facebook, Twitter, Linked In, Reddit, and Pinterest). Power analysis was used to determine a sample size of 130. It is derived from a consideration of an α level of .05 and an effect size of .80 (Soper, 2020).

Three scales used for this study were the following: The Quality of Life in Bipolar Disorder Scale (QoL B.D.), the Psychological Well-Being-Short Form Scale (SPWB), and the Satisfaction with Life (SWL) scale. The QoL B.D. For this research study, a Cronbach's alpha was conducted to examine the intern-item reliability for each scale used with the 163 participants. For this study, the alpha level for the QoL B.D scale had a higher (Cronbach's alpha 0.96) and so as for the SWL (Cronbach's alpha .83), and consistent with the original scale for the SPWB (Cronbach's alpha .83).

For research question number one, demographic questions were regressed on the dependent variable, the QoL of individuals with bipolar disorder. This research study found that the independent variables were significant with the QoL of the individuals with bipolar disorder. The multiple linear regression results suggest that individuals with a high school or less education are less likely to have a higher quality of life. In a similar effect, those with a higher educational level (Graduate Degree) and higher income and involved in educational activities are more likely to have a higher quality of life. These findings are consistent with various research

studies validating that education and income factors are strong predictor factors for a higher QoL for individuals with bipolar disorder.

For research question number two, the correlation coefficient for psychological well-being and QoL was significant, indicating a high relationship between the individuals' psychological well-being and QoL. Multiple regression showed that three specific character strengths had a significant relationship between psychological well-being and a higher QoL. Environmental Mastery, Self-Acceptance, and Autonomy are three models of thinking in reference for optimal psychological functioning. For example, having environmental mastery traits, would mean that individuals can oversee situations, fitting very well with others around them, functioning well socially, strong resilience and coping skills, and capable to build relationships successfully. Self-acceptance and autonomy clearly defined character strengths of self-esteem, optimism, self-compassion, hope, generosity, and self-empowerment.

For research question number three, positive psychological practices were correlated with the QoL of individuals with bipolar disorder. In the same nature as question number two, character strengths such as optimism and well-being became key positive psychology constructs making a difference in living with bipolar disorder.

Conclusions

Bipolar disorder is associated with significant impairments to functioning and well-being. Continued research studies suggest QoL has unique strengths as a descriptive variable and clinical target explored. This study provides preliminary insights into the relationships among variables that result from positive well-being and life satisfaction, therefore underlining optimal human functioning and a higher quality of life. The following can be concluded from this study. For the participants in this research study:

1. The demographics of high school degree (negatively), a graduate degree, income, educational activities, and being Jewish (negatively) are significantly related to Quality of Life.

2. The subfactors of psychological well-being environmental mastery, self-acceptance and autonomy are significantly related to Quality of Life.

3. The items of life satisfaction including 1) The Condition of My Life is Excellent, 2) I have Gotten Important Things in Life and 3) If I Could Live Over, I would Change Almost Nothing are significantly related to Quality of Life.

Recommendations for the Future Research

Bipolar disorder is associated with significant impairments to functioning and well-being. Research studies suggest QoL has unique strengths as a descriptive variable and clinical target needing exploration. Similarly, growing research on well-being and positive psychology constructs suggest clinicians may enhance character strengths such as optimism and self-compassion. For mental health providers and researchers, it is necessary to understand better the meaning and significance of factors associated with psychological well-being and a higher QoL to address the specific needs of people with bipolar disorder.

Overall results from this study attempt to address factors leading to increased recovery, adaptive positive functioning, and ultimately an improved QoL. More research is recommended to further understand to what extent positive psychological factors and a higher QoL are traits characteristic of individuals with bipolar disorder. From the individual with BD viewpoint, positive outcomes of treatment are likely to improve engagement and adherence. Understanding predictive factors associated with higher outcomes in QoL can very well assist in treatment development and modalities.

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APPENDIX A

APPENDIX A

Informed Consent

Positive Well-Being and Satisfaction with Life: Variables Affecting the Quality of Life of People with Bipolar Disorder

Thank you for your interest in participating in this study. This study is being conducted by Maria Treviño-Zuniga, M.Ed., and Jerome Fischer, Ph.D. in the School of Rehabilitation Services and Counseling at the University of Texas Rio Grande Valley.

Purpose of the Study

The purpose of this study is to examine the effects of positive well-being on the quality of life of people with bipolar disorder. You will be asked a series of questions about your experiences living with bipolar disorder, including your well-being and your quality of life. The time estimated to complete these questions will be approximately 7-15 minutes. To participate in this study, you need to

- be at least 18 years or older
- be diagnosed as having bipolar disorder by a psychiatrist or mental health practitioner,
- being able to communicate in the English language.

Voluntary Participation

Please know that your participation in this research is entirely voluntary. You may stop at any time without penalty. However, all questions must be answered entirely in order for your answers to be utilized in the research. Your participation will be anonymous. At no point in the study will you be asked to provide your name or other identifying information. All data will be stored in a USB external drive and kept safe under a locked key.

Potential Benefits and Risks

There are no direct benefits to the subjects. There are no foreseeable risks associated with this study; however, if you encounter any psychological or emotional distress resulting from reading survey questions, we advise you to (a) seek immediate help through a mental health professional or your current medical provider, (b) or refer to the Resource section below.

Resources

National Alliance of Mental Illness (NAMI). Helpline for treatment options, 1-800-950-NAME (6264) or email: infor@nami.org. Monday-Friday 9:00 a.m. – 6:00 p.m.

Crisis Text Line Crisis Counselor or trainee. Text HELLO to 741741 for free crisis support in the U.S., 24 hours daily.

- National Suicide Prevention Lifeline 1-800-273-8255, 24 hours daily
- Depression and Bipolar Support Alliance (DBSA) provides information on bipolar disorder and depression, offers in-person and online support groups and forums 800-826-3632.

This research has been reviewed and approved by the Institutional Review Board for Human Subjects Protection (IRB). If you have any questions about the participant's right or feel that the researcher is not adequately meet your right as a participant, please contact the IRB at (956) 665-2889 or email rib@utrgv.edu.

Participants give their consent to the study by pressing the "Yes, I Agree to Participate" button to activate the online survey. Should you have any questions or concerns about this study, please contact us via phone or email.

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APPENDIX B

APPENDIX B

Demographic Questionnaire

Demographic Questions: These questions are aimed to understand the identity of our participants better. We seek to get basic information about you, allowing us to find out where each person fits in our general population**.**

1. **How old are you?**

2. **Gender/Gender Identity. How do you identify?**
    - Woman
    - Man
    - Transgender/Trans Woman
    - Transgender/Trans Man
    - Non-Binary
    - Not Listed

3. **Sexual Orientation**
    - Heterosexual/Straight
    - Gay/Lesbian
    - Bisexual
    - Not Listed:
    - Prefer not to reply

4. **Relationship status**
    - Unspecified
    - Single
    - In a relationship
    - Engaged
    - Married
    - In an open relationship
    - Widowed
    - Separated
    - Divorced
    - In a civil union

- In a domestic partnership

5. What is your current religion, if any?

- Catholic (incl. Roman Catholic and Orthodox)
- Protestant (incl. Anglican, Orthodox, Baptist, Lutheran)
- Christian Orthodox
- Jewish
- Muslim
- Sikh
- Hindu
- Buddhist
- Atheist (do not believe in God)
- Agnostic (not sure if there is a God)
- Something else, Specify
- Nothing, in particular, just a Christian
- Do not know

6. How many times do you attend religious services or ceremonies at your place of worship?

- Never
- Less than once a year
- Once or twice a year
- Several times a year
- Once a month
- 2-3 times a month
- About once a week
- Several times a week

7. Education Attainment

- High School or less
- Associate's Degree
- Bachelor's Degree
- Graduate Degree (e.g., MBA, JD. D., MD)

8. What is your annual income?

9. Number of years since your diagnosis:

10. How many times have you been hospitalized for your mental illness/illnesses?

- None, 1-3 times, 4-7 times, 8-11 times, More than 12

11. What is your current treatment plan?

- Medication Only
- Psychotherapy/Counseling only
- Medication & Psychotherapy/Counseling
- Other _____
- None

12. Are you currently engaged in any educational activities?

- Yes
- No

13. Are you currently engaged in any paid or voluntary work?

- Yes
- No

APPENDIX C

APPENDIX C

Qualtrics Survey/Scales

1. The Quality of Life in Bipolar Disorder (QoL B.D.)

Questionnaire. The QoL.BD is a 56-item disease-specific self-report measure designed to capture patients' subjective perceptions of QoL (physical, sleep, mood, cognition, leisure, social, spirituality, finance, household, self-esteem, independence, and identity). Patients describe their experiences over the past seven days on a 5-point Likert scale ranging from strongly disagree (1) to strongly agree (5). The Cronbach's alpha for this scale was 0.87 (n = 199). (Michalak et al., 2010).

Instructions: The following items ask about a range of experiences, behaviors, and feelings related to the quality of life. Tell us about your quality of life by rating how much you agree with each of the statements below. Please do not spend too long on each item. It is your first impression we are interested in. Over the past 7 days, I have…

1 = Strongly Disagree 2 = Disagree 3 = Neutral 4 = Agree 5 = Strongly Agree

1. Had plenty of energy
2. Had the right amount of exercise for me
3. Felt physically well
4. Been content with my sex life
5. Woken up feeling refreshed
6. Had no problems getting out of bed
7. Had about the right amount of sleep for me
8. Kept a routine in my sleep-wake schedule
9. Felt happy
10. Enjoyed things as much as I usually do
11. Felt able to cope
12. Felt emotionally balanced
13. Thought clearly
14. Had good concentration
15. Had no difficulties with memory
16. Made plans without difficulty
17. Enjoyed my leisure activities
18. Been interested in my leisure activities

19. Had fun during my leisure activities
20. Expressed my creativity
21. Enjoyed spending time with other people
22. Been interested in my social relationships
23. Had meaningful friendships
24. Been able to share feelings or problems with a friend
25. Been satisfied with the spiritual side of my life
26. Expressed my spirituality as I wish
27. Practiced my spirituality as I wish
28. Kept routine in my spiritual life
29. Had enough money for basic needs
30. Had enough money for extras
31. Felt secure about my current financial situation
32. Had no difficulties with debts
33. Done my daily household chores
34. Been organized around my home
35. Kept my home tidy
36. Kept my home clean
37. Felt respected
38. Felt accepted by others
39. Felt as worthwhile as other people
40. Felt able to cope with stigma
41. Had a sense of freedom
42. Felt safe in my home environment
43. Traveled around freely (e.g., driving, using public transport)
44. Felt others have allowed my independence
45. Had a strong sense of self
46. Had a stable sense of what I am really like
47. Had a clear idea of what I want and don't want
48. Had control over my life
49. Been confident in my abilities at work
50. Met demands at work
51. Been satisfied with the quality of my work
52. Been reliable at work
53. Enjoyed my educational activities
54. Felt confident about finishing my educational activities
55. Performed to my usual standards educationally
56. Organized my educational activities adequately

Are you currently engaged in any paid or voluntary work? Yes or No

Are you currently in any educational activities? Yes or No

The scale of the Psychological Well-Being-Short Form (SPWB-SF). The SPWB-SF is a widely used, 18-item self-report scale designed to measure psychological well-being. Participants responded to each item using the Likert scale ranging from strongly disagree (1) to strongly agree (5). The instrument comprises six subscales: Life Purpose, Personal Growth, Positive Relationships with Others, Autonomy, Environmental Mastery, and Self-Acceptance. The SPWB-SF has been shown to correlate positively with happiness and life satisfaction measures and negatively with measures of depression. Subscales on the short form version correlate highly with those on the original form (α = .70 to .89) (Ryff & Keyes, 1995).

Instructions: For each of the following statements, please circle the number of the answer that best states how you feel about the statement.

1 = Strongly Disagree; 2 = Moderately Disagree; 3 = Slightly Disagree; 4 = Slightly Agree; 5 = Moderately Agree; 6 = Strongly Agree

1. I tend to be influenced by people with strong opinions.
2. In general, I feel I am in charge of the situation in which I live.
3. I think it is important to have new experiences that challenge how you think about yourself and the world
4. I live life one day at a time and don't really think about the future
5. Maintaining close relationships has been difficult and frustrating for me.
6. When I look at the story of my life, I am pleased with how things have turned out.
7. I have confidence in my opinions, even if they are contrary to the general consensus.
8. The demands of everyday life often get me down
9. For me, life has been a continuous process of learning, changing, and growth.
10. Some people wander aimlessly through life, but I am not one of them.
11. People would describe me as a giving person, willing to share my time with others.
12. I like most aspects of my personality.
13. I judge myself by what I think is important, not by the values of what others think is important.
14. I am quite good at managing the many responsibilities of my daily life
15. I gave up trying to make big improvements or changes in my life a long time ago
16. I sometimes feel as if I have done all there is to do in life.
17. I have not experienced many warm and trusting relationships with others.
18. In many ways, I feel disappointed about my achievements in life

3. Satisfaction with Life (SWL) Scale. The SWL has four items assessed how satisfied participants were across work, economic security, social activities/relationships, and living arrangement domains on a 1 (very satisfied) to 5 (very dissatisfied) scale. The coefficient alpha for the scale has ranged from .79 to .89, indicating that the scale has high internal consistency (Pavot & Diener, 2008).

Instructions: Below are five statements that you agree or disagree with. Using the 1-7 scale below, indicate your agreement with each item by placing the appropriate numbers on the line preceding that item. Please be open and honest in your responses.

7 = Strongly agree; 6 = Agree; 5 = Slightly agree; 4 = Neither agree or disagree; 3 = Slightly disagree; 2 = Disagree; 1 = Strongly disagree

1. In most ways, my life is close to my ideal.
2. The conditions of my life are excellent.
3. I am satisfied with my life.
4. So far, I have gotten the important things I want in life.
5. If I could live my life over, I would change almost nothing.

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FIGURE 5

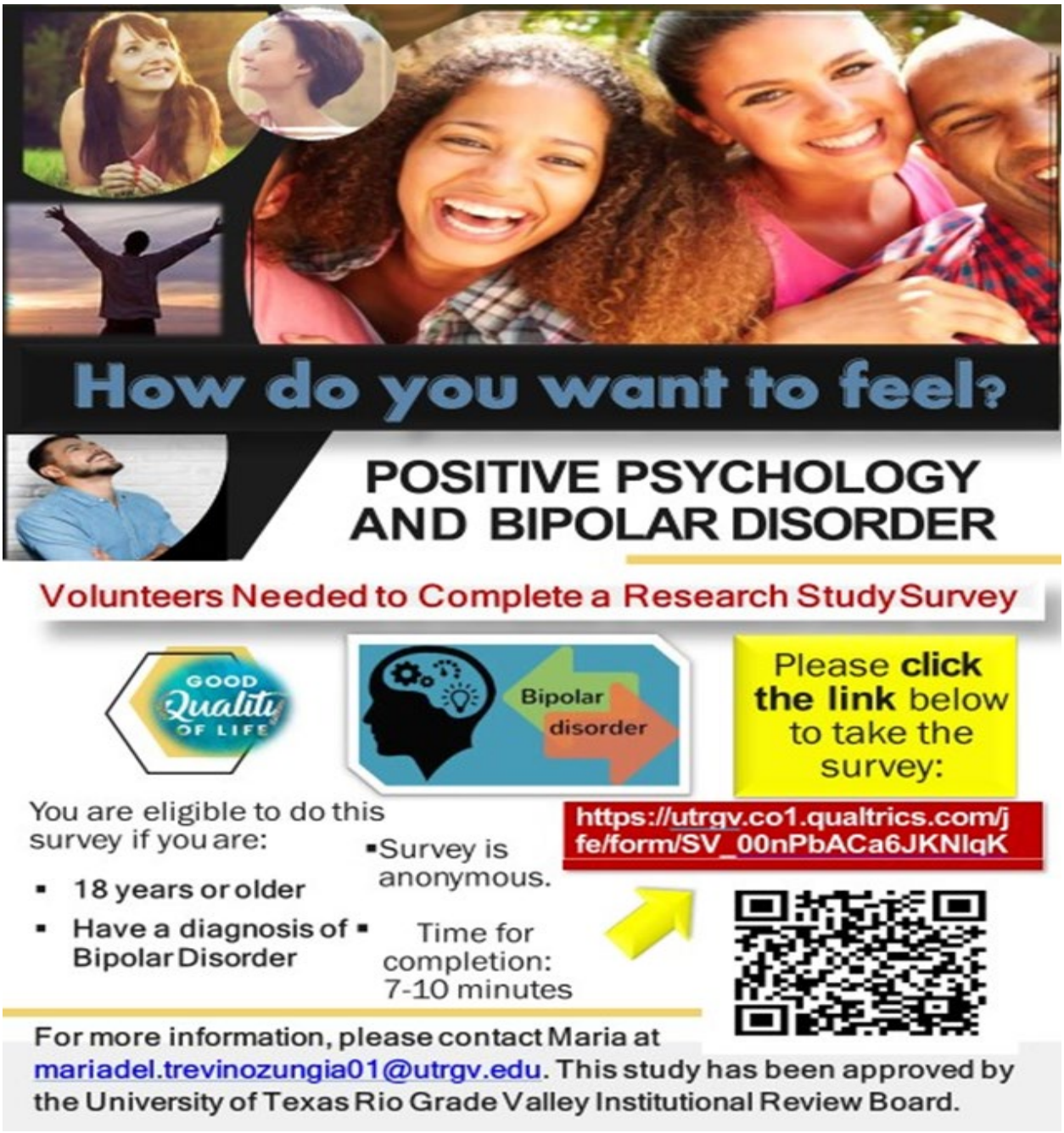

FIGURE 5. Social Media Recruitment Flyer

BIOGRAPHICAL SKETCH

Maria Treviño-Zuniga earned her Doctoral of Philosophy (Ph.D.) degree in Rehabilitation Counseling in December 2021 from the University of Texas Rio Grande Valley (UTRGV). Dr. Treviño-Zuniga obtained a Bachelor in Fine Arts (BFA) with a Minor in Business Administration in 1998 from the University of Texas Pan-American (UTPA). She then started her career as an art teacher in the secondary level in 1999. In 2002, she earned a Master's Degree in Guidance and Counseling from UTPA. Dr. Treviño-Zuniga began her career as a school counselor at a district alternative education program campus (DAEP) in the mid-valley area, Mercedes, Texas. In 2005, she obtained her credentials as a Licensed Professional Counselor (LPC). She actively continues in her private practice as an LPC-Supervisor. Dr. Treviño-Zuniga is the founder and CEO of HART Counseling Services in Pharr, Texas. Her clients include individuals of all ages but with more participation of children and adolescents. As an LPC-S, she has an interest in the field of positive psychology and the fine arts as a creative expression fostering healing and mental well-being. Presently, Dr. Treviño-Zuniga works as a school counselor for the Pharr-San Juan-Alamo ISD in the Rio Grande Valley. As a school counselor, her main objective is promoting her students' emotional, social, and academic growth. Dr. Treviño-Zuniga also provides training and consultation in educational and clinical settings. She can be contacted via email at LPCTREVINOZ@yahoo.