Walden University
A higher degree. A higher purpose.

Walden University
ScholarWorks

Walden Dissertations and Doctoral Studies

Walden Dissertations and Doctoral Studies Collection

2018

Exploring Relationships of Meaning, Co-Occurring Diagnoses, and Attitudes About Substances

Misty Grant
Walden University

Follow this and additional works at: https://scholarworks.waldenu.edu/dissertations

Part of the Psychiatric and Mental Health Commons

This Dissertation is brought to you for free and open access by the Walden Dissertations and Doctoral Studies Collection at ScholarWorks. It has been accepted for inclusion in Walden Dissertations and Doctoral Studies by an authorized administrator of ScholarWorks. For more information, please contact ScholarWorks@waldenu.edu.

Walden University

College of Counselor Education & Supervision

This is to certify that the doctoral dissertation by

Misty Grant

has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

Review Committee
Dr. Corinne Bridges, Committee Chairperson, Counselor Education and Supervision Faculty
Dr. Michelle Perepiczka, Committee Member, Counselor Education and Supervision Faculty
Dr. Jason Patton, University Reviewer, Counselor Education and Supervision Faculty

Chief Academic Officer
Eric Riedel, Ph.D.

Walden University
2018

Abstract

Exploring Relationships of Meaning, Co-Occurring Diagnoses, and Attitudes About Substances

by

Misty Grant

MA, Argosy University, 2012

BS, University of Utah, 2010

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Counselor Education and Supervision

Walden University

November 2018

Abstract

It is increasingly important to understand the factors associated with individuals struggling with addiction and their quality of life, especially with those struggling with co-occurring diagnoses (CODs). The purpose of this study was to explore the extent to which meaning, and CODs of anxiety and depression predict an individual's attitudes and beliefs about addiction among persons receiving treatment for substance use disorders (SUDs). The theoretical foundation used to guide this study was logotherapy, which emphasizes the importance of increasing meaning in life through choices, while also centering on being able to find meaning in all situations. A cross-sectional correlation design was employed, using a sample of patient admission records from a dual diagnosis treatment center in the western United States. The responses on 4 assessments related to meaning, symptoms of anxiety and depression, and attitudes about substances were analyzed using a multiple linear regression. There was no statistically significant relationship between an individual's attitudes and beliefs about addiction as predicted by that individual's meaning and CODs symptoms of anxiety and depression. A significant negative correlation existed between depression and meaning ($p < .01$), while a significant positive correlation existed between the depression and anxiety ($p < .05$) as well as the anxiety and attitudes about substances ($p < .01$). The findings from this study can assist counselor educators in understanding the correlation between SUD, increased depressive symptoms, and low personal meaning.

Exploring the Relationships of Meaning, Co-Occurring Diagnoses, and Attitudes About Substances

by

Misty Grant

MA, Argosy University, 2012

BS, University of Utah, 2010

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Counselor Education and Supervision

Walden University

November 2018

Dedication

This dissertation is dedicated to my husband, Scott. You have been my rock more than you know and sacrificed many years to see this through with me; thank you for always standing beside me. I am forever thankful for your love and support.

I also dedicate this dissertation to my family and friends who have endured this long journey with me. Thank you to everyone who has helped me during my doctoral process, the laughter, support, guidance, and unwavering foundation was always needed and appreciated. There were many sacrifices made by all, thank you for never losing your belief in me.

This accomplishment is a result of seeing those who are suffering from co-occurring diagnoses have the courage to reach out for help; may everyone know there can be a different path to life.

Acknowledgments

I would like to thank my committee members. First of all, my chair, Dr. Corinne Bridges, for her support, expertise, guidance, and faith in me. You not only offered writing expertise and emotional support but patience and encouragement throughout the long process. I would also like to thank my second committee member, Dr. Michelle Perepiczka, for your knowledge and guidance, as well as your humor; it helped me continue to push through. I would like to also thank my URR, Dr. Jason Patton; thank you for your willingness to join last minute and provide your comprehension, support, and invaluable feedback. I would also like to thank Dr. Walter Frazier; although no longer on my committee, there were countless hours spent supporting me with your knowledge, understanding, and thorough feedback.

I would like to acknowledge my husband, Scott; your endless support, reassurance, inspiration, and love keeps me going. You are a larger part of this than I think you know; I always know that you've Got My 6, Hooah. My mother for instilling in me a belief that I can accomplish my dreams and a resilient work ethic. My siblings for your continued support, love, and belief in me. My friends for their understanding and assistance with this process; the laughter, tears, and unwavering support was always welcomed and extremely appreciated.

I would like to thank Dr. CR for his assistance, guidance, encouragement, and support throughout this project. I would also like to acknowledge the treatment center for their trust in me and their support in completing this study.

Table of Contents

List of Tables v

Chapter 1: Introduction to the Study 1

Introduction 1

Background 2

Problem Statement 3

Purpose of the Study 7

Research Question and Hypotheses 7

Theoretical Framework 8

Nature of Study 9

Types and Sources of Data 10

Definitions 10

Assumptions 12

Scope and Delimitations 13

Limitations 13

Significance and Social Change 14

Summary 15

Chapter 2: Literature Review 16

Introduction 16

Literature Search Strategy 17

Theoretical Framework 17

Logotherapy Application 21

Logotherapy Measures 25
Existentialism 25
Literature Review 27
Substance Use Disorders and Comorbidities 27
Transdiagnostic Factors 28
Substance Use Disorder and Co-Occurring Disorder Treatment 34
Meaning and Purpose 36
Meaning 37
Purpose 39
Spirituality 41
Counseling Field 42
Summary 43
Chapter 3: Research Method 45
Introduction 45
Research Design and Rationale 45
Research Questions and Hypotheses 49
Methodology 50
Population 50
Sampling 51
Sample Size 56
Archival Data Procedures 58
Data Access 59

Instrumentation 60

Variables 61

Threats to Validity 65

Ethical Procedures 66

Data Analysis Plan 67

Summary 71

Chapter 4: Results 72

Introduction 72

Data Collection 72

Results 74

Sample Descriptive 75

Descriptive Statistics for Independent Variables 79

Descriptive Statistics for the Dependent Variable 80

Statistical Analysis and Findings 81

Multiple Regression Analysis 83

Summary 84

Chapter 5: Discussion, Conclusion, and Recommendations 86

Introduction 86

Interpretation of Findings 87

Limitations of the Study 91

Recommendations 92

Implications 93

Positive Social Change 93
Recommendations for Action 94
Conclusion 95
References...97
Appendix A: XXX Data Use Agreement..125
Appendix B: XXX Data Consent Form..129
Appendix C: Permission to Use the Personal Meaning Profile – Brief...........................131
Appendix D: Permission to Use the Burns Anxiety Inventory.......................................132
Appendix E: Permission to Use the Beck Depression Inventory II................................133
Appendix F: Permission to Use the Brief Substance Abuse Attitude Survey 136

List of Tables

Table 1. Demographics Variables Coding Formatting 73

Table 2. Genders 76

Table 3. Age Range.................... 76

Table 4. Relationship Status 76

Table 5. Tobacco Use 76

Table 6. Drug of Choice.................... 77

Table 7. Route of Administration for Drug of Choice.................... 78

Table 8. Previous Treatment Episode 78

Table 9. Treatment Levels of Care (LOC).................... 78

Table 10. Race/Ethnicity.................... 78

Table 11. Correlation 83

Chapter 1: Introduction to the Study

Introduction

According to the National Institute on Drug Abuse (NIDA; 2015, 2017), the cost of substance abuse in the United States exceeds $500 billion per year, including dollars spent on crime prevention, legal and justice system involvement, decreased work productivity, missed work days, and associated increases in overall health care costs. NIDA estimated in 2013 that 24.6 million Americans or approximately 9.4% of the population over the age of 12 had used an illicit substance in the past month, with over half of the respondents (54.1%) reporting that they had begun using an illicit substance when they were under the age of 18 years old.

A large risk factor for those affected by a substance use disorder (SUD) is having a co-occurring mental health issue (Horton, Luna, & Malloy, 2016). Previous researchers have shown that dealing with a SUD and co-occurring mental health problems can relate to a lower quality of life satisfaction, increased health care costs, rates of disability, and risk for suicide (Galek, Flannelly, Ellison, Silton, & Jankowski, 2015; Laramée et al., 2013; Worley et al., 2012). Anxiety and depression are the most common co-occurring mental health issues comorbidities found with substance dependence (Alvaro, Roberts, & Harris, 2013; Sugarman, Kaufman, Trucco, Brown, & Greenfield, 2013).

With this study, I wanted to gain further insight into the importance of integrating an individual’s sense of meaning when addressing co-occurring diagnoses (CODs) during SUD treatment. I hoped to increase counselor educators’ awareness around the importance of addressing one's sense of meaning in life during substance use treatment

due to the relationship with one's CODs symptoms of depression and anxiety and attitudes about substances. It is increasingly important that counselor educators understand the vastly changing landscape treatment for SUDs and CODs due to the impact they have on the future generation of counselors.

In Chapter 1, I explain the overview of the study, including a description of the problem, the gaps within the current literature, and the research question and hypotheses that were used in this study. I lay the groundwork for the background of this study as well as the theoretical framework and how this theory assisted with this current study's given the research questions and hypotheses. I define terms that are in this study along with discussing the limitations, delimitations, assumptions, and significance of this study.

Background

There is considerable interest in understanding the factors associated with a substance user's quality of life within the addiction treatment industry (Best et al., 2013). Koivumaa-Honkanen et al. (2012) addressed the relationship between life satisfaction and alcohol use and concluded that as alcohol indicators increased, life dissatisfaction increased accordingly. Goodwin and Stein (2013) showed that there is evidence of a strong lifetime association between anxiety disorders and major depressive disorder (MDD) with substance dependence. Researchers have presented evidence where patients struggling with both MDD and anxiety disorders may experience self-medicating behaviors (Crum et al., 2012; Goodwin & Stein, 2013). Comorbidity increases the likelihood of early treatment dropout rates and increased relapse risk (Gamble et al., 2013).

Researchers have previously shown that meaning is a primary and fundamental aspect of human motivation (Brassai, Piko, & Steger, 2012; Frankl, 1970; Heintzelman & King, 2014). Frankl (1970) discussed the benefit that logotherapy, or the quintessence of finding meaning in a seemingly meaningless situation, can have on addictions. Individuals struggling with CODs experience consistent obstacles that may impede sustained recovery due to the special nature of the symptomology of SUDs and CODs (Laudet & Humphreys, 2013).

While meaning in life is unique to everyone, the nature of meaning allows it to be influenced by outside factors (Grouden & Jose, 2015). Conceptually, meaning is derived from feeling as though one has a purpose, matters in life, and has reliable connections with others (Heintzelman & King, 2014). Researchers have shown that having increased purpose is a significant predictor of better substance abuse treatment outcomes regarding relapse and use frequency, even when controlling at baseline for depression, substance use, and age (Martin, MacKinnon, Johnson, & Rohsenow, 2011). Meaning in life is a protective factor, and researchers have found an association between meaning and decreased levels of antisocial and aggressive behaviors and higher levels of physical activity (Brassai et al., 2012).

Problem Statement

Approximately 21.5 million people (age 12 or older) have a SUD, according to the 2014 national survey on drug use and health (Han, Hedden, Lipari, Copello, & Kroutil, 2015), which represents the continued need within the counseling field to deepen the understanding of SUDs. A major challenge for those struggling with SUDs is a lack

of meaning and purpose in life (Diaz, Horton, & Malloy, 2014). Some of the highest rates of depression and SUDs have been found within the SUD treatment community; Diaz et al. (2014) found that 63% in a sample of 77 adults engaged in substance abuse treatment reported clinical levels of depressive symptoms and lower levels of meaning in life. Diaz et al. discussed a need for continued research to further understand anxiety, attachment styles, and meaning in life for individuals struggling with SUDs. While Horton et al. (2016) found that for individuals struggling with CODs and SUDs during a residential treatment program in Florida experienced an increase in existentialism, created by high levels of spirituality, resulting in a decrease in anxiety which was a result of forming secure attachments. Horton et al. (2016) discussed the need for future research to address possible protective factors associated with SUDs and the nuances of spirituality for clients during SUD treatment.

Meaning in life is defined as those things that an individual believes in, places value on, and is committed to (Awasthi, Chauhan, & Verma, 2014; George & Park, 2014; Heintzelman & King, 2014; Steger, 2012). While Purpose in life is defined as the feeling that one has regarding having a direction in life and value and significance in their ability to engage in their goals, both past, and present, that is connected to their overall belief about their life (Heintzelman & King, 2014; Steger, 2012). Heintzelman and King (2014) reviewed information and results from a previous study (Heintzelman, Trent, & King, 2013) with a total sample of 443 adults and found that while meaning in life is sensitive to coherence of stimuli, understanding the specific variables (i.e., religiousness, faith, connection to self) related to meaning in life needs further understanding.

A lack of meaning in life can lead to a variety of health issues, including physical illnesses, decreased stress response, and decreased psychological functioning, which in turn increases mental illness symptoms (Kim, Strecher, & Ryff, 2014; Roepke, Jayawickreme, & Riffle, 2013; Steger, 2012). Martin et al. (2011) reported that there is a positive correlation between having a sense of meaning and the capacity to overcome difficulties in life and an ability to increase mental and physical welfare. A sense of meaning in life is also a significant predictor of an individual's substance relapse potential (Martin et al., 2011). Meaning in life, as found by Martin et al. in a sample of 154 adults, can be used to predict the use of cocaine and alcohol within 6 months after 30 days in residential SUD treatment. Martin et al. asserted that there is a future research need on the role of meaning and purpose in SUD treatment.

CODs are a leading cause of disabilities in the United States (Gamble et al., 2013). While researchers thus far have looked at certain aspects of meaning and CODs for individuals struggling with SUDs, there is a further need to understand the relationship between meaning and CODs and the effect it may have on an individual's attitudes and beliefs about addiction as well as their mental health symptoms. A SUD is a challenging disease, usually associated with a persistent pattern of substance use that leads to significant impairment and distress (American Psychiatric Association [APA], 2013). When coupled with CODs, such as depression and anxiety, achieving sobriety or long-term recovery can become an even bigger challenge (Thornton et al., 2012).

As over half of the individuals struggling with addiction have CODs, addressing both the addiction and the mental health issues together assists individuals for a greater

recovery potential (Thornton et al., 2012). Anxiety and depression are the most common mental health conditions diagnosed as co-occurring with SUDs (Alvaro et al., 2013; Sugarman et al., 2013). Alvaro et al. (2013) reviewed nine studies with a combined sample of 7,336, where variables such as depression, anxiety, and sleep were assessed. While Alvaro et al. found that a directional relationship existed between anxiety and depression, there is a need for research that addresses covariates (such as SUDs).

Researchers have found that the presence of CODs increases relapses among alcohol and drug dependent persons and includes the possibility of repeated relapses due to the impact of mental health symptoms on addiction (Houck, Forcehimes, Gutierrez, & Bogenschutz, 2013; Thorton et al., 2012). The comorbidity of MDD and alcohol use disorder is one of the most prevalent and leading causes of disability in adulthood (Brière, Rohde, Seeley, Klein, & Lewinsohn, 2014; Gamble et al., 2013; Sugarman et al., 2013), which shows the significant effect these disorders have on society. Gamble et al. (2013) conducted a study with a sample of 17, assessing alcohol-dependent females with major depression. They found that increasing the understanding between SUDs and depression is needed to increase a more integrated treatment model for patients (Gamble et al., 2013). Similarly, Sugarman et al. (2013) conducted a study with a sample of 101 alcohol-dependent adults during inpatient SUD treatment and found that depression was associated with overall drinking outcomes. Sugarman et al. supported future research in addressing improved SUD treatment outcomes, such as understanding life-functioning outcomes and factors that may influence these outcomes.

Purpose of the Study

The purpose of this archival quantitative study was to explore the relationship through a regression model of meaning and symptoms of anxiety, symptoms of depression, and attitudes towards substances. The three independent variables in this study were an individual's meaning and purpose, as well as the CODs symptoms of anxiety and depression. The dependent variable in this study was the attitudes about addiction.

Through the analysis of the collected data, I estimated the extent to which meaning and CODs of anxiety and depression predict an individual's attitudes about addiction. Increasing knowledge around an individual's attitudes about substances can assist in further developing SUD treatment. This research has the potential to raise awareness about the importance of addressing one's meaning in life during substance use treatment due to the relationship with one's COD symptoms and attitudes about substances.

Research Question and Hypotheses

Research Question 1: To what extent does meaning, as measured by the Brief Personal Meaning Profile (PMP-B; Wong, 1998, 2012), and CODs severity of anxiety, as measured by the Burns Anxiety Inventory (BAI; Burns, 1999), and severity of depression, as measured by the Beck Depression Inventory II (BDI-II; Beck, Steer, & Brown, 1996), relate to an individual's attitudes about addiction, as measured by the Brief Substance Abuse Attitude Survey (BSAAS; Chappel, Veach, & Krug, 1985)?

Null hypothesis (H_0): There is no statistically significant correlation between a regression model including meaning, as measured by the PMP-B (Wong, 1998, 2012), and CODs severity of anxiety, as measured by the BAI (Burns, 1999), and severity of depression, as measured by the BDI-II (Beck et al., 1996), and an individual's attitudes about addiction, as measured by the BSAAS (Chappel et al., 1985) among persons receiving treatment for drug and alcohol addiction.

Alternative hypothesis (H_1): There is a statistically significant correlation between a regression model including meaning, as measured by the PMP-B (Wong, 1998, 2012), and CODs severity of anxiety, as measured by the BAI (Burns, 1999), and severity of depression, as measured by the BDI-II (Beck et al., 1996), and an individual's attitudes about addiction, as measured by the BSAAS (Chappel et al., 1985) among persons receiving treatment for drug and alcohol addiction.

Theoretical Framework

The theoretical framework for this study was logotherapy, the theoretical orientation developed by Frankl (2006). Frankl discussed the idea that any person holds the ability to find meaning in any situation. Logotherapy emphasizes the importance of increasing purpose in life by stressing choices, responsibility, and living a life that is consistent with one's meaning and values (Martin et al., 2011). Additionally, logotherapy focuses on the importance of the present moment and one's goals, perspective, and meaning (Frankl, 2006). Frankl and Smith (2013) discussed that logotherapy could be extremely beneficial to individuals struggling with addiction given the importance placed upon present moment awareness, not focusing on the past, and the

ability to progress towards meaningful pursuits in life. In Chapter 2, I provide a more detailed explanation of logotherapy.

Suwanphahu, Tuicomepee, and Kaemkate (2016) found in a sample of 180 young (18-22 years old) criminal offenders with behavioral and substance abuse issues that logotherapy appeared to be a promising method for improving well-being, but further research is needed to assess for efficacy. Martin et al. (2011) found in a sample of 154 adults that aspects of logotherapy proved to provide a better outcome regarding relapse potential and long-term recovery after SUD treatment. Horton et al. (2016) found in a sample of 252 adults engaged in a residential SUD treatment program that increased levels of spirituality, which is an aspect of logotherapy, was shown as a protective factor for SUDs. Horton, Diaz, Weiner, and Malloy (2012) found in a sample of 77 adults engaged in a residential SUD treatment program that focused on existential meaning and purpose in life and religiousness provided greater outcomes against relapse on substances.

Nature of Study

The nature of this study was using an archival quantitative method to focus on the extent that meaning and co-occurring mental health symptoms of anxiety and depression correlate to an individual's attitudes about addiction. I obtained and analyzed archival quantitative data. In using Frankl's (2006) framework, I explored the relationship between meaning and purpose along with CODs (symptoms of anxiety and depression), which were the independent variables used in this study. The dependent variable in this study was an individual's attitudes about addiction while undergoing SUD treatment.

This study created an opportunity to understand the role that meaning holds during SUD treatment for individuals struggling with CODs.

Types and Sources of Data

The archival data that I used in this study spanned an 18-month period from a treatment center located in the western part of the United States. I used information from four assessments for this study: the PMP-B (Wong, 1998, 2012), which measured meaning, the BAI (Burns, 1999), which measured severity of anxiety symptoms, the BDI-II (Beck et al., 1996), which measured severity of depression symptoms, and the BSAAS (Chappel et al., 1985), which measured an individual's attitudes about addiction. The four assessments were given upon admission into the individual's COD treatment program. The information obtained by these four assessments provided me the opportunity to explore the combination of meaning, CODs symptoms of anxiety and depression, in relation to an individual's attitudes about addiction.

Definitions

With this study, I explored the relationship between meaning and symptoms of CODs depression and anxiety during SUD treatment while also exploring if meaning has a relationship with attitudes towards substances. Further discussed in this section are the key term definitions that were used in this study.

Anxiety: Emotion characterized by the presence of excessive feelings of tension and nervousness, along with physical symptoms such as a racing heart, tightness in chest, numbness, and restlessness (APA, 2013). Symptoms of anxiety are associated with feelings of being tense, uptight, on edge; thoughts of the mind jumping from one thing to

the next or having racing thoughts; and physical symptoms of difficulty breathing, choking sensation, and a racing heart (BAI; Burns, 1999).

Co-occurring diagnoses (CODs): Having more than one disorder; referring to at least one or more substance-related disorders as well as one or more mental health disorder (Substance Abuse and Mental Health Services Administration, 2014).

Depression: Feelings characterized by an ongoing low mood, a lack of or diminished interest in pleasurable activities, fatigue, loss of energy, feelings of worthlessness, or inappropriate guilt (APA, 2013). The BDI-II (Beck et al., 1996) assesses for symptoms and attitudes associated with a depressed state, using similar feelings discussed in the diagnostic criteria within the *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.; *DSM–5*; APA, 2013).

Meaning: A personally constructed system that bestows life with personal significance (Wong, 1998, 2012). Meaning is a built from the things that an individual believes in, places value on, and is committed to (Awasthi et al., 2014; George & Park, 2014; Heintzelman & King, 2014; Steger, 2012), which can be measured by the PMP-B that focuses on an individual's perception of their personal achievement, religion, self-transcendence, relationship, intimacy, fairness, and self-acceptance (McDonald, Wong, & Gingras, 2012). Meaning in life at times has been associated with purpose in life or the feeling that one has regarding having a direction in life and value and significance in their ability to engage in their goals, both past and present, that is connected to their overall belief about their life (Heintzelman & King, 2014; Steger, 2012).

Substance use disorder (SUD): A disorder by the *DSM–5* (5th ed.; APA, 2013), characterized by compulsive habitual substance use that extends from a mild to a severe presentation, which can include chronic relapses on substances. A key characteristic for this disorder is that there is continued use despite harmful consequences, significant impairment, and distress (APA, 2013). The DSM-5 (APA, 2013) diagnostic criteria for SUDs typically includes 10 to 11 key symptoms that have occurred over the last 12 months, two of which must be met for a diagnosis.

Assumptions

Throughout the 18-month period from which the archival data were acquired, information was collected from individuals entering into a SUD treatment program. These individuals answered self-report survey questions that investigated substance use, symptoms of anxiety and depression, meaning in life, and attitudes about addiction. Therefore, an assumption was made that the individuals answered these questions honestly and to the best of their ability and knowledge at that time. The archival data did not include any identifying information. When the archival data were previously collected, individuals were informed that their participation in the study was voluntary, and participants could withdraw at any time.

The archival data were inclusive of participants who were admitted into a substance use treatment program. Participants needed to be able to read or understand the questions asked on the four assessments contained within the archival data. The archival data used in this study were analyzed for normality, homoscedasticity, and

linearity (see Field, 2013; Stangor, 2014). I assessed the archival data for any violations of assumptions for regression analyses (see Stangor, 2014).

Scope and Delimitations

In this study, I explored the relationship between meaning and CODs, specifically, a SUD along with anxiety and/or depression during substance use disorder treatment while also exploring if meaning had a relationship with attitudes towards substances. This study provided an opportunity to explore the combination of meaning and symptoms of anxiety and depression, in relation to attitudes about addiction. Delimitations that narrowed the focus of this study area as follows:

1. I limited the study to adults, above the age of 18 years old.
2. I limited the study to individuals who have CODs, specifically, a SUD along with anxiety and/or depression.
3. I limited the study to individuals who were undergoing co-occurring diagnosis treatment.
4. I limited the study to the participants undergoing treatment at one treatment center located in the western part of the United States.

Limitations

The study posed limitations and weaknesses in both the study design and implementation. The sample population was only those who were able to read and write in English, above a 7th grade educational level. The sample population was given the various assessments during the specified time frame by an employee of the treatment organization. A limitation associated with a cross-sectional study is the challenge of

simultaneously obtaining all information to be assessed (Selkie, Kota, Chan, & Moreno, 2015). A cross-sectional study can infer an association but not causation (Selkie et al., 2015). There was also the risk of nonresponse bias due to study participants' responses differing from the general population (Selkie et al., 2015). A limitation of an archival study is the data are not collected to tackle a research question (Cheng & Phillips, 2014). Archival studies create limitations for researchers due to not being involved in the actual data collection process (Cheng & Phillips, 2014).

Significance and Social Change

This study provided insight into understanding the role meaning and purpose in life have on an individual when addressing CODs during SUD treatment. The ability to find meaning in life creates an opportunity to replace despair with hope (Singer, Singer, & Berry, 2013). This study increases counselor educators' understanding of those struggling with addiction and the impact meaning may have on their disease. It also extends counselor educators' understanding of the role that meaning, self-acceptance, and an individual's ability to overcome life's adversity have in addiction treatment and how these can affect current counselor education. An increase in meaning and self-acceptance creates an opportunity to change the negative script that many addicts struggle with (Singer et al., 2013). This study may able to impact counselor education by increasing the understating of the relationship between meaning, symptoms of anxiety and depression, and attitudes on challenges in life such as addiction.

The study provided an opportunity to increase counselor educators' understanding of meaning during addiction, along with symptoms of depression and anxiety, when

related to an individual's attitudes about addiction. This created an opportunity to assess if a relationship existed between meaning, symptoms of anxiety, and depression while undergoing treatment for addiction. Generating further understanding of meaning, anxiety, and depression allows for counselor educators to shift their thinking and thus teaching about the disease of addiction.

Summary

In Chapter 1, I described the background and focus of the study. I focused on the issue of understanding the importance of integrating meaning and purpose in life when addressing CODs during SUD treatment. I provided a description regarding the significant background information that supports the importance of furthering the counselor educator's knowledge about meaning and purpose in life when addressing CODs during SUD treatment. A brief description was given regarding the scope, assumptions, and limitations of this study.

In Chapter 2, I provide an in-depth review of SUDs and comorbidities or CODs and meaning and purpose in life; this information will build upon Chapter 1. In Chapter 3, I describe the research design, research questions, and hypotheses while also discussing the sampling, IRB process, and data analysis. In Chapter 4, I provide detailed results regarding the analyses performed along with an interpretation of the results in Chapter 4, and in Chapter 5, I conclude with an overall summary that addresses recommendations for future research and additional implications for social change.

Chapter 2: Literature Review

Introduction

There is a need to understand the extent to which an individual's personal sense of meaning and co-occurring diagnoses (CODs) symptoms of anxiety and depression relate to an individual's attitudes about addiction. Counselor educators are unable to fully equip and train counselors that are entering the field of addiction because they fail to understand the dynamic interplay of CODs, individuals' sense of meaning and purpose, and their attitudes about their addictions. The purpose of this quantitative study was to examine the relationship between an individual's personal sense of meaning and CODs symptoms of depression and anxiety during substance use disorder (SUD) treatment while also exploring whether the personal sense of meaning has a relationship with the individual's attitudes towards substances. The independent variables in this study were an individual's sense of meaning and purpose in life as well as the CODs symptoms of anxiety and depression. The dependent variable in this study was the attitudes about addiction.

In this chapter, I discuss the literature search strategy I used for this study. I review the literature on logotherapy, the theoretical framework guiding this dissertation. Logotherapy is a form of existential analysis intended to help individuals find meaning in a seemingly meaningless situation (Frankl, 2006). Logotherapy is designed to increase one's meaning and purpose in life through highlighting choice, responsibility, and living a life that is consistent with an individual's personal values (Martin et al., 2011). After reviewing the theoretical framework, I review recent literature that supports the approach

for studying SUDs and comorbidities, meaning, spirituality, and purpose. Finally, I include a summary of the information provided.

Literature Search Strategy

In developing a comprehensive literature review, I conducted systematic database searches to located recent relevant scholarly articles. I used the following databases when conducting my literature search: EBSCOhost, ERIC, Google Scholar, ProQuest, PsycARTICLES, PsycINFO, and Sage. The following keywords were used both alone and in various combinations: *addiction*, *addiction treatment, attitudes, beliefs, comorbidities, co-occurring diagnoses, purpose, meaning, purpose, substance use disorders, substance disorder treatment*, *relapse*, *relapse prevention,* and *transdiagnostic factors*. Search terms related to the theoretical framework included *existentialism, logotherapy*, *Viktor Frankl*, and *will to meaning*. I only used relevant peer-reviewed scholarly journal articles from 2012 or later, locating and reading titles, abstracts, and keywords to identify the possible connection to this study. Older works that I reference are seminal or important works that are vital to this research study.

Theoretical Framework

Frankl (2006) was the originator of logotherapy, a psychotherapeutic model designed to help individuals find meaning in a seemingly meaningless situation. Frankl emphasized that one cannot always change their situation but can create meaning by understanding and accepting one's freedom of will. At the foundation of logotherapy is the belief that meaning can empower individuals to gain awareness and ability to overcome any difficulty in life (Frankl, 2006). Logotherapy focuses on the ability to seek

meaning regardless of the situation, through further seeking, understanding, and development of one's values and beliefs (Smith, 2013). Logotherapy focuses on the ability to seek meaning regardless of the situation (Smith, 2013). It is designed to increase purpose in life by highlighting choices, responsibility, and living a life that is consistent with an individual's personal meaning and values (Martin et al., 2011).

By grounding clients in the present moment and assisting them in defocusing on their past, logotherapy allows them to gain perspective on their goals by connecting to their individual sense of meaning potential (Frankl, 2006). Frankl (2014) discussed the benefit that logotherapy can have on addictions, noting that logotherapy addresses the existential vacuum or the absence of philosophy in life formed from the deficiency of previous traditions and values to provide current guidance. The existential vacuum that is created by addiction is addressed logotherapeutically by tackling the negative coping mechanisms that an individual struggling with addiction has used while increasing progression towards meaningful pursuits in life and love (Frankl, 2006, 2014; Smith, 2013). According to Frankl (2006), if meaninglessness is a result of addiction, then addiction treatment should provide the opportunity for restoration of meaning. Frankl described logotherapy as being an open and collaborative method that can be combined with other psychotherapeutic approaches as complementary instead of a pure substitution (Ameli, 2016; Frankl, 2006). Logotherapy, which is focused on healing through meaning, is based on the belief that humans have an inner drive to find meaning in life (Yehuda et al., 2016).

Logotherapy views an individual in three overlapping dimensions: the somatic, psychological, and spiritual or noetic (to avoid religious connotation; Ameli, 2016). The dimensions encompass the human spirit, which Frankl described as that which is uniquely human and what distinguishes humans from other animals (as cited in Ameli, 2016). While the first two dimensions (somatic and psychological) often have automatic reactions, the spiritual or noetic dimension is where a human can choose how to behave (Ameli, 2016). The power of choice, which distinguishes humans from other animals, can be unpredictable due to the connection of intentionality behind each specific choice an individual makes (Ameli, 2016).

Logotherapy involves an optimistic view of an individual's potential and is rooted in a future orientation that is focused on "what is left rather than what is lost" (Yehuda et al., 2016; para. 16). It centers on individuals' abilities to discover, interact, and choose to overcome their problems while focusing on the assets and strengths the individuals have and their future possibilities and potentials (Ameli, 2016). By focusing more on the attitudinal shift that needs to occur for individuals instead of focusing on the current or continued symptoms, individuals experience a true shift in their life perspective (Ameli, 2016; Frankl, 2006). Frankl discussed his view that all humans encounter numerous experiences throughout their lives that create certain sets of skills that the individual can use to engage in a life worth living (as cited in Yehuda et al., 2016). Logotherapy focuses on the essence of responsibility, which is a core area for human life given that humans must take responsibility to assess, address, and deal with life's trials through

action, behavior, and their attitude (Ameli, 2016; Ameli & Dattilio, 2013; Frankl, 1970, 2014).

Logotherapy is based on three main principles: the freedom of will, will to meaning, and meaning in life (Ameli & Dattilio, 2013; Frankl, 2006). Freedom of will emphasizes that even with the ability to choose, people are bound within the limits of select possibilities under all circumstances (Ameli & Dattilio, 2013; Frankl, 2006). While not free from all biological, psychological, and sociological conditions, humans are able to take a stand toward these conditions (Ameli & Dattilio, 2013; Frankl, 2006). Humans will always have an option to choose a form of freedom because of the innate ability to adjust attitudes regardless of the situation. The will to meaning is the central motivation for humans since humans can sacrifice pleasure and endure pain for a meaningful cause (Ameli & Dattilio, 2013; Frankl, 2006).

Meaning in life emphasizes that under all circumstances, there is meaning to be found, even during suffering (Ameli & Dattilio, 2013; Frankl, 2006). Since meaning is unconditional, humans must discover it instead of inventing it through three categorical values: creative, experiential, and attitudinal (Ameli & Dattilio, 2013). The creative value flourishes when an individual gives something to the world by accomplishing a task, creating something, or engaging in a good deed (Ameli, 2016). The experiential value is engaged when an individual takes something from the world through an experience, such as love, beauty, or truth (Ameli, 2016). Finally, the attitudinal value is engaged when an individual takes a stand toward an unchangeable situation or

unavoidable suffering, by choosing to be courageous instead of cowardly, seeking compassion instead of vengeance, or demanding honesty instead of deceit (Ameli, 2016).

Logotherapy Application

Logotherapy's three main principles (freedom of will, will to meaning, and meaning in life; Frankl, 2006) are vital to SUD and CODs recovery. As to remain stuck, blocked, or frustrated by these main principles means a continued incapability of finding meaning and purpose in one's life that will lead to continued experiences of emptiness, hopelessness, despair, or the existential vacuum (Ameli, 2016; Frankl, 2006). In working with those struggling with CODs, it is important to assist clients in becoming fully aware of their ability to take responsibility for themselves and to choose, decide, and act upon the life they want to live (Frankl, 2006). Increasing well-being through optimism and hope increases resilience attitudes, which reduces relapse risk for individuals with SUDs and CODs (Ameli, 2016).

Park, Park, and Peterson (2010) identified and found a correlation between the presence of meaning in life, the search for meaning in life, life satisfaction, happiness, positive and negative affect, and depression in a sample of 731 adult participants. Park et al. showed that it is easier to discover meaning once meaning is already recognized while trying to find meaning prior to already establishing meaning leads to difficulty and frustration. Park et al. focused on adult participants who voluntarily registered on a website and completed a measure of their choosing. This method of study response did not allow for assessment or diagnostic criteria to be evaluated on the participant because data were exclusively self-reported.

Steger, Oishi, and Kesebir (2011) found a relation between meaning in life and life satisfaction in a sample of 151 of undergraduate students. This relation was stronger for the individuals actively searching for meaning in life (Steger et al., 2011). The majority of Steger et al.'s sample population demographics were very specific; engaging in a similar study method with a different population would be warranted to assess if similar results may be found. For individuals struggling with SUDs life satisfaction, self-efficacy, and an ability to have an attitudinal shift regarding overcoming suffering or obstacles is significantly diminished (Grella & Stein, 2013; McKay et al., 2013; Sugarman et al., 2013). Joshi, Marszalek, Berkel, and Hinshaw (2013) found through structural modeling that existential frustration resulted in a persistent cycle of meaninglessness, relating to general life dissatisfaction because of experiential avoidance. Joshi et al. discussed the need for future researchers to explore the relationship between experiential avoidance and decreased meaning, supporting a need to better understand the relationship between CODs and an individual's sense of meaning. Individuals struggling with SUDs find themselves in the existential vacuum caused by continued hopelessness, meaninglessness, and lack of purpose in life (Frankl, 2006, 2014; Ortíz & Flórez, 2016).

Haugan (2013) addressed the relationship between meaning in life, quality of life, and symptoms of depression and anxiety. While positive correlations were found between meaning in life, hope, the overall quality of life, and emotional functioning, Haugan found negative correlations between meaning in life and symptoms of depression and anxiety. Haugan's population was nursing home patients, with his study addressing

psychological and physical well-being. The study I conducted focused on a different population than Haugan's (2013), I focused on individuals undergoing substance use treatment and the relationship between an individual's sense of meaning, CODs symptoms of anxiety and depression, and attitudes towards addiction. Armstrong and Manion (2015) found that meaning in life has been found to be a protective factor for suicidal ideation in a youth population. Specifically, they found a negative correlation between meaningful engagement in life and suicidal ideation with depressive symptoms and risk behavior (Armstrong & Manion, 2015). Wilchek-Aviad & Malka (2016) addressed the impact of meaning in life on suicidal tendencies in a population with increased risk and found a negative correlation between meaning in life, suicidal tendencies, depression, and anxiety. While the COD population struggling with SUDs have similarities with the immigrant youth population Wilchek-Aviad & Malka used for their study, it is vital to understand and address population specifics to address challenges.

Volkert, Schulz, Brütt, and Andreas (2013) addressed the relationship of meaning in life with patients with mental disorders upon admission into a mental health unit inpatient program, which was found to be significantly lower upon admission than upon discharge or at a six month follow up. Volkert et al. (2013) compared a sample population of 214 adult males and females that were undergoing inpatient treatment for a broad spectrum of mental health disorders; with primary diagnoses being depressive, anxiety, and somatoform disorders; against a control group. Volkert et al. (2013) focused on an inpatient population, like that of my study, their population was based in Germany

and compared against German national statistics this study I conducted looked at a sample based in the western part of the United States.

Min et al. (2013) found that characteristics of low resilience were found in patients diagnosed with depression and anxiety; indicating that meaning can serve as a resilient factor for those struggling with these CODs. Min et al. (2013) focused on an outpatient anxiety and mood disorder clinic associated with the Seoul St. Mary's Hospital, while this supports the COD issues that I address, their population did not have the SUD component that I also address. Martin et al. (2011) addressed the effect of meaning in life as a predictor for the efficiency of treatment and found that lower sense of meaning in life significantly predicted the use of cocaine and alcohol after 30 days of residential SUD treatment. After controlling for age, baseline cocaine use and depressive symptoms a lower purpose in life was shown to significantly predict a higher number of cocaine use ($p<.01$) and drinking days ($p<.05$) (Martin et al., 2011). While Martin et al. (2011) specifically focused on cocaine use, I focused on a population that encompasses all SUDs as well as specific CODs.

Kleftaras and Katsogianni (2012) found significant negative correlations between depressive symptoms and meaning in life which indicates the importance of addressing meaning in life for those people suffering from SUDs. Adult participants with alcohol dependence showed that the greater their depressive symptoms the greater the depth in their existential vacuum which in turn creates a large negative attitude towards life; whereas participants with alcohol abuse showed that they had lower depressive symptoms and higher meaning in life due to their daily manifestation of their routine,

attitude, and behaviors that support their life purpose (Kleftaras & Katsogianni, 2012). Kleftaras and Katsogianni (2012) focused on those struggling in Greece with solely alcohol disorders; I focused on individuals that are struggling with all types of SUDs while also addressing CODs of anxiety and depression.

Logotherapy Measures

To assess, address, and quantify the meaning in life construct, multiple psychometric measures were created including the Purpose in Life (PIL), The Life Purpose Questionnaire (LPQ), the Seeking of Noetic Goals Test (SONG), the Meaning in Suffering Test (MIST), and the Life Attitude Profile-Revised (LAP-R) (Ameli, 2016). For this study, I used the Brief Personal Meaning Profile (PMP-B; Wong, 1998, 2012) since it focuses on four major areas of life which include: religion, relationship, achievement, and self-transcendence that have shown significance in developing meaning in life (McDonald et al., 2012). These areas are interwoven with the treatment for SUDs and CODs which relate to the current study I conducted.

Existentialism

The central theme of existential theory is meaning and purpose (Van Deurzen & Adams, 2011). Existentialism can be a key area for some in being able to adapt to life's ever-changing circumstances, by providing a way for an individual to make sense of his or her life by assigning meaning and taking responsibility (Reker, 2000). Individuals that struggle with substance abuse and comorbidities have reported having a low sense of meaning and purpose in their lives (Martin et al., 2011). Sustained recovery has shown strong connections with increased self-awareness, purpose and meaning, and spirituality

(Harris, Fallot, & Berley, 2014). Harris et al. (2014) interviewed women trauma survivors struggling with SUDs and CODs and found that four main themes that supported substance recovery were a connection to self and others, self-awareness, meaning and purpose, and spirituality. While Harris et al. (2014) engaged in a qualitative approach their population was solely women while encompassing a variety of SUDs and CODs; I employed a quantitative approach utilizing both males and females.

Meaning and purpose in life is both a motivational and protective factor connected to one's goals, values, and function in their life (Martin et al., 2011). This is important to understand due to the effect and role that it has when looking at addiction recovery, comorbidities, and attitudes about addiction. Human existence is built upon continuous struggles to various degrees providing individuals with the ability to cope with these struggles while also understanding and moving towards their potential (Reker, 2000); which is essential to life in recovery from both addiction and comorbidities.

Thompson (2016) looked at existentialism during addiction treatment, investigating if meaning therapy or existentialism influenced how participants made sense of their addiction. Thompson (2016) found in his mixed methods study, of 11 adult men that engaged in both pre and post treatment interviews as well as the PIL test, that existentialism increased measures of meaning while decreasing addictive symptoms and daily problems. Krentzman (2013) conducted a review on the application of positive psychology to substance use, addiction, and recovery research. While there were minimal (less than 10) studies found for the review these studies consisted of a wide range of populations and topics on various addictions (work, cigarettes, and alcohol use)

(Krentzman, 2013). Krentzman (2013) found that while existentialism and addiction recovery has been growing in popularity, there continues to be a need for research that identifies the conceptual framework between existentialism and addiction recovery. Logotherapy has shown the ability to assist in increasing hope within those struggling with addiction while also decreasing depressive symptoms (Khaledian, Yarahmadi, & Mahmoudfakhe, 2016). In an experimental study of 20 adult men undergoing addiction treatment group logotherapy showed to decrease depressive symptoms while increasing personal beliefs of hope (Khaledian et al., 2016). The study consisted of adult men that had a score of either severe or extreme depression on the BDI, after engaging in group logotherapy the BDI scores showed a significant decrease when compared with the control group (Khaledian et al., 2016). This information provides support for the study I conducted, although I included a mixed gender population while addressing anxiety and attitudes about addiction. A common theme amongst individuals struggling with addiction and depression is a lack of meaning in life and hopelessness (Diaz et al., 2014; Horton et al., 2016; Khaledian et al., 2016; Martin et al., 2011; Razali, Razali, Dokoushkani, & Mehrad, 2015).

Literature Review

Substance Use Disorders and Comorbidities

Research shows that only a small percentage of individuals struggling with SUDs ever receive treatment (Grella & Stein, 2013; Hasin & Grant, 2015; Keyes et al., 2012; Mulvaney-Day, DeAngelo, Chen, Cook, & Alegría, 2012). In fact, according to Grella and Stein (2013), only 25% of those with an alcohol use disorder and 40% of those with a

SUD receive treatment. General barriers for individuals seeking treatment include a lack of motivation and logistical issues (transportation, time allotment, cost), showing that identifying areas of motivation for individuals are vital to assisting with one's ability to achieve long-term sobriety (Grella & Stein, 2013). Further, co-occurring SUDs, comorbid depression, and lower self-confidence only increase the likelihood that an individual will not enter treatment or achieve sustained sobriety from substances or long-term recovery (McKay et al., 2013; Sugarman et al., 2013).

Despite current negative trends in seeking treatment for substance abuse issues, working toward effective treatment solutions is essential. In the longitudinal National Epidemiological Survey on Alcohol and Related Conditions (NESARC), results showed that treatment is important due to the positive impact that occurs through improving one's quality of life and assisting with one's ability to achieve sustained sobriety or long-term recovery (Grant et al., 2015; Grella, Karno, Warda, Niv, & Moore, 2009; Hasin & Grant, 2015). Additionally, results from NESARC showed that there continues to be a significant extensive psychiatric comorbidity, which points to underlying transdiagnostic factors (Hasin & Grant, 2015). These transdiagnostic factors discussed below, allow for greater understanding and consideration regarding the high rates of comorbidity that occur within SUDs, anxiety, and depression (Eaton, Rodriguez-Seijas, Carragher, & Krueger, 2015).

Transdiagnostic Factors

Transdiagnostic factors are certain specific factors that are shared between multiple disorders, these factors are thought to not only contribute to the disorders but are

also responsible for the comorbidity among the disorders (Spinhoven, Drost, de Rooij, van Hemert, & Penninx, 2015). According to Eaton et al. (2015), transdiagnostic factors are discussed as internalizing or externalizing; internalizing problems would be sadness and anxiety, whereas externalizing problems would be impulsivity, rule-breaking, and aggressiveness. Distress tolerance has been shown to be a transdiagnostic factor, in a recent study (*N* = 783) of young adult veterans, between mental health symptoms (depression), PTSD, and alcohol misuse (Holliday, Pedersen, & Leventhal, 2016). Rumination and worry have shown a partly mediated association with fear (anxiety) and distress (depression) disorders; which shows that repetitive negative thinking is a transdiagnostic factor for anxiety and depressive disorders (Holliday et al., 2016; Spinhovenet al., 2015).

A common factor amongst individuals struggling with a major depressive disorder (MDD), generalized anxiety disorder (GAD), or co-occurring MDD-GAD is consistent rumination and worry in daily life (Kircanski, Thompson, Sorenson, Sherdell, & Gotlib, 2017). To further understand the transdiagnostic constructs of anxiety and depressive disorders further investigation across a wide range of affected clinical populations is needed (Kircanski et al., 2017). The Beck Depression Inventory II (BDI-II) assesses transdiagnostic areas of general distress as well as core components of depression within adults, whereas the Burns Anxiety Inventory (BAI) assesses transdiagnostic areas of worry and rumination as well as core components of anxiety within adults (Jensen, Cohen, Mennin, Fresco, & Heimberg, 2016; Subica et al., 2014).

Transdiagnostic factors are important given their emergence as having a significant role in comorbidity due to the various underlying indicators that cut across the specific diagnostic categories (Eaton et al., 2015). As research (*N* = 34,563) has found that both internalizing and externalizing transdiagnostic factors have been positively associated with treatment utilization (Rodriguez-Seijas, Eaton, Stohl, Mauro, & Hasin, 2017), the increasing need to further understand the role these factors play within treating comorbidities is increasingly important. Further, transdiagnostic factors have exhibited a strong interpretable hierarchy of mental disorders over time, which highlights the benefits of increasing the understanding of these factors (Kim & Eaton, 2015). Transdiagnostic factors allow clinicians to better assess and understand comorbidities creating a stronger foundation in which to work with clients (Kim & Eaton, 2015).

Grella and Stein (2013) discussed, from a national sample of over 1,200 that a decrease in self-efficacy, social support, and ability to manage stressors are important covariates in sustained recovery, which are usually factors that are also associated with depression and anxiety. These areas are usually large proponents in explaining why individuals seek treatment for their SUDs (Grella & Stein, 2013). According to Hasin and Grant (2015), the NESARC results showed a link among comorbidities, social support, and stress, which emphasizes the importance of understanding and addressing all areas as opposed to focusing on only one (substance disorder, anxiety, or depression). Understanding the factors associated with the reason's individuals seek and sustain recovery is important when gaining further insight into their anxiety, depression, and SUD (Hasin & Grant, 2015).

National research has shown that individuals with alcohol use disorder struggle with a variety of comorbidities, including anxiety and mood disorders (Grella & Stein, 2013). Research shows that over half of those that struggle with SUDs meet criteria for psychiatric disorders (Eaton et al., 2015; Grant et al., 2015; Hasin & Grant, 2015; McKay et al., 2013; Sugarman et al., 2013). Of these psychiatric disorders, the most dominant disorders being anxiety and depression, therefore increasing the understanding of the dynamics associated with these disorders is vital to treatment (Sugarman et al., 2013). Ongoing depressive symptoms, low self-efficacy, and continued or increased psychiatric symptoms may lead to a continuous struggle with substance relapses (McKay et al., 2013; Sugarman et al., 2013). A direct correlation has been shown to exist between substance use, increased depressive symptoms, and lower self-efficacy, which increases the likelihood that continued substance use will occur (Sugarman et al., 2013).

The above information supports the staggering statistic that approximately 50%-80% of individuals who enter substance abuse treatment dropout before a three-month time frame (Deane, Wootton, Hsu, & Kelly, 2012). It is evident that continuing to increase the knowledge about understanding the dynamics that exist between substance abuse and comorbidities would allow for an increased ability to provide treatment for individuals struggling with these disorders. Self-efficacy plays a significant role in substance abuse and comorbidities; it seems that further identifying and understanding the importance this has in life is crucial (Deane et al., 2012; McKay et al., 2013; Sugarman et al., 2013).

In a 14-month study with 618 participants that were engaged in one of the eight residential treatment centers run by the Australian Salvation Army, at the three-month mark over 50% (354 participants, 57.3%) had dropped out of treatment (Deane et al., 2012). Self-efficacy has exhibited an ability to mediate the relationship between cravings, relapses, and plays a role in engaging coping skills to address high-risk situations (Deane et al., 2012). Deane et al. (2012) found that at intake if substances other than alcohol were noted as the primary drug and higher self-forgiveness were noted that the individual was more likely to drop out of treatment by the three-month time frame.

McKay et al. (2013) in three longitudinal studies with $N = 766$, participants were engaged in an intensive outpatient program, met criteria for cocaine dependence, and had depressive symptoms. Results showed that greater depression ($p < .0001$) and psychiatric conditions ($p < .003$) predicted a lower likelihood that the participant would remain in treatment or be able to become cocaine free (McKay et al., 2013). This study is similar to the study I conducted, although I focused on other central areas, McKay et al. (2013) assisted in providing information regarding challenges that may exist for those undergoing treatment.

Sugarman et al. (2013) conducted a longitudinal study with $N = 101$ adults that were undergoing inpatient alcohol treatment. Participants were followed for over a year with monthly follow up visits, met criteria for alcohol dependence and prevalent comorbidities of major depression (37.6%) and anxiety disorders (24.8%), a chief focus of the study was on continued sobriety and daily functioning (Sugarman et al., 2013).

Drinking outcomes were associated with education level, self-efficacy, social support, and depression at baseline (Sugarman et al., 2013). Sugarman et al. (2013) findings support the importance of understanding the impact that addiction, depression, self-efficacy, and daily functioning has in continued research. The study I conducted also focused on these areas while also considering the changes in anxiety, meaning and purpose, as well as one's attitudes about addiction.

Both anxiety disorders and MDD have previously shown strong relationships around having repeated attempts of self-medication to relieve or lessen symptoms (Crum et al., 2012; Goodwin & Stein, 2013). Utilizing the NESARC data Crum et al. (2012) found from a sample of 34,653, after adjustments for confounding variables, that there was a consistent association between self-medication and alcohol dependence. Crum et al. (2012) also found that for participants with anxiety symptoms self-medication drinking was strongly positively associated ($p < 0.0001$). I integrated depression and other areas into the study I conducted, the Crum et al. (2012) study supports the need for continued research and understanding into both SUDs and CODs. Goodwin and Stein (2013) addressed the confounding demographic factors and comorbidities that existed within the National Comorbidity Survey ($N = 5{,}788$), which consisted of individuals ages 15-54.

Goodwin and Stein (2013) showed that there is evidence of a strong lifetime association between anxiety disorders, MDD, and substance dependence. The associations found by Goodwin and Stein (2013) supports the importance of understanding transdiagnostic factors for SUDs and CODs. As pointed out by Crum et

al. (2012) attention needs to be given to both clinical education and treatment efforts regarding a further understanding of anxiety symptoms along with SUDs. Given that a history of psychiatric disorders increases one's risk for substance dependence, it seems imperative to understand more about the complexities that exist between substance dependence and comorbidities as well as the interventions that can have a positive impact for change (Crum et al., 2012; Goodwin & Stein, 2013; McKay et al., 2013; Sugarman et al., 2013).

Substance Use Disorder and Co-Occurring Disorder Treatment

A common challenge amongst treating both SUDs and CODs at the same time is the lack of expertise to treat both disorders together (Wüsthoff, Waal, & Gråwe, 2014). Usually resulting in sequential or parallel treatments which offer poor treatment outcomes (Wüsthoff et al., 2014). In 2014 a study across eight states and a total of 256 programs were assessed using the Dual Diagnosis Capability in Addiction Treatment (DD AT) index; results showed that a patient or family seeking services had a 1 in 10 to 2 in 10 chance of having both a mental health disorder and an addiction disorder treated adequately (McGovern, Lambert-Harris, Gotham, Claus, & Xie, 2014). Which continues to show the lack of integrated services despite the nationwide request for action to address patients' needs during treatment (McGovern et al., 2014). Mental and SUDs have been a leading global cause of non-fatal disease, leading to an increase on the health systems meant to assist with these disorders in both developed and developing regions (Rehm, Shield, Gmel, Rehm, & Frick, 2013; Whiteford et al., 2013).

Stability in recovery from both SUDs and CODS involves the ability to decrease both symptoms and maintain abstinence from substances which can only occur if both disorders area addressed concomitantly, in not addressing both disorders jointly individuals are at higher risk for relapse (Kelly, Daley, & Douaihy, 2012; Morisano, Babor, & Robaina, 2014). While both SUDs and CODs commonly occur together, there are no empirically supported treatments for these specific combinations of disorders (Worden, Davis, Genova, & Tolin, 2015); leaving both counselor educators and clinicians trying to figure it out on their own. During parallel treatments both disorders (SUDs and CODs) are treated simultaneously yet separately, in which studies have shown no improvement for individuals or worsening of symptoms overall (Morley et al., 2016; Randall, Thomas, & Thevos, 2001; Wolitzky-Taylor, Operskalski, Ries, Craske, & Roy-Byrne, 2011). According to recent research common clinical practice in primary care settings has been to postpone COD treatment until a SUD has been treated appropriately (Wolitzky-Taylor et al., 2015).

Evidence has shown that once established SUDs and CODs can mutually reinforce and maintain each other which can negatively impact treatment, supporting the need for highly trained clinicians and treatment approaches (Ruglass, Lopez-Castro, Cheref, Papini, & Hien, 2014). Clinicians perceive low treatment adherence or compliance amongst patients with comorbidities due to worsening of symptoms or substance relapse (Roncero et al., 2016); showing the importance of treatment addressing a patient's symptoms and substance use to improve adherence. Individuals with SUDs and CODS usually have an increase in the perceived unmet need for treatment which can

be attributed to the scarcity of specialized treatment services available (Melchior, Prokofyeva, Younès, Surkan, & Martins, 2014). National research shows that only half of the US mental health treatment centers offer dual diagnosis treatment with this number not shifting over the last decade even with the public request for action (Melchior et al., 2014). The continued lack of forward progress in dual diagnosis treatment is attributed to insufficient clinical knowledge, lack of empirically supported standardized treatment guidelines, and insufficient organizational support (Melchior et al., 2014; Worden et al., 2015).

Meaning and Purpose

Research has shown that meaning in life is an important factor in optimal life functioning (Dezutter et al., 2013; Heintzelman & King, 2014; Steger, 2012; Steger, Dik, & Duffy, 2012). Meaning in life also plays a significant role in an individual's ability to cope with severe life stressors (Dezutter et al., 2013). There is limited research around the influence meaning in life has on an individual's mental health, which can be entangled with comorbidities such as substance abuse; as well as limitations caused by conceptual concerns (Dezutter et al., 2013; Sherman & Simonton, 2012). Moreover, when individuals do not experience meaning psychological distress can increase, creating a need to address both the lack of meaning and increased distress (Frankl, 2006). Individuals dealing with comorbidities experience an increase in significant stressors, in both daily life and their ability to manage stressors (Dezutter et al., 2013; Grella & Stein, 2013; McKay et al., 2013).

Empirical research thus far has focused more on the presence of meaning in relation to medical stressors without addressing the search for meaning (Cohen & Cairns, 2011; Dezutter et al., 2013; Sherman & Simonton, 2012; Steger, 2012). While the presence of meaning has been positively associated with psychological well-being, associations between the search for meaning and psychosocial functioning has been less evaluated (Dezutter et al., 2013; Diaz et al., 2014; Steger, 2012). García-Alandete (2015) found that within Spanish undergraduates (*N* = 180) a significant relationship existed between meaning in life and psychological well-being, especially with global psychological well-being, self-acceptance, environmental mastery, and positive relations. The above discussed areas are usually a focus during standard SUD treatment, which shows the importance of understanding the impact that may occur on varying levels (i.e., SUD, COD, meaning and purpose, attitudes and beliefs about substances).

Meaning

Meaning and purpose in life is a binary construct that includes both existential and psychological characteristics (Awasthi et al., 2014). Meaning in life is defined as those things that an individual believes in, places value on, and is committed to (Awasthi et al., 2014; Frankl, 2006, 2014; George & Park, 2014; Heintzelman & King, 2014; Steger, 2012). Purpose in life is the feeling that one has regarding having a direction in life, value and significance in their ability to engage in their goals, both past, and present, which connects to their overall belief about their life (Heintzelman & King, 2014; Steger, 2012). In studies conducted by Heintzelman et al. (2013) adults that perceive life as meaningful are sensitive to stimuli and cognitive aspects when they can relate these areas

back to their personal meaning. The results from Heintzelman et al. (2013) show that the human role of adaptation may have a profound effect on an individual's ability to find both personal and life meaning. Those struggling with addiction find themselves in an existential vacuum because of feelings of hopelessness, meaninglessness, and lack of life purpose (Frankl, 2006, 2014; Ortíz, & Flórez, 2016).

A lesser sense of meaning in an individual's life has been shown to play a role in one's substance dependence; it also influences their substance dependence treatment outcomes (Martin et al., 2011). Since a lack of meaning in life has been shown to be a significant factor in substance relapse (Diaz et al., 2014; Horton et al., 2016; Martin et al., 2011; Razali et al., 2015); it seems imperative to understand the possible predictive nature of meaning in relation to one's attitudes and beliefs about addiction. Meaning in life is a protective factor and associated with decreased levels of antisocial and aggressive behaviors and higher levels of physical activity; which are issues associated with addiction and comorbidities (Brassai et al., 2012). Grouden and Jose (2015) discussed the importance of understanding that meaning in life is unique to everyone and that external factors have an influence on one's meaning. Being able to understand an individual's personal meaning and evaluate the possible effect of comorbidities, and attitudes about addiction may have on one's personal meaning is imperative to substance treatment. Meaning has been associated with better overall life functioning and quality of life (Ortíz, & Flórez, 2016); two areas that significantly decrease during addiction and significant psychiatric disorders.

Horton et al. (2016) conducted a study with 252 clients that were engaged in a residential treatment program in south Florida. Horton et al. (2016) explored the relationship between personality disorders traits, spirituality, and adult attachment; results showed that existential meaning and purpose in life was the best predictor of certain personality disorder traits (i.e., avoidance, anxiety) and attachment issues. Individuals that had less anxiety, due to a more secure attachment style, along with high levels of spirituality, which connects with increased existentialism, experienced fewer SUDs and CODs (Horton et al., 2016). This information supports the study I conducted and the need to continue to gain insight into the dynamics between meaning and purpose, CODs, SUDs, and one's attitudes about addiction.

Purpose

Heintzelman & King (2014) described the importance of meaning and purpose in life as being a core component to having an individual feel as if they matter, have significance, and understand the soundness about their life making sense. They expressed that there are both motivational and cognitive components of one's meaning and purpose in life. Purpose in life is the ability to pursue one's highly valued goals (George & Park, 2014; Heintzelman & King, 2014; Martela & Steger, 2016). Choosing goals can provoke feelings of worthiness, whereas goal striving (simulation, implementation, and intention) leads to feelings of satisfaction and fulfillment which are related to having a sense of purpose in life; which has been shown to increase one's meaning (Martela & Steger, 2016). The significant role that meaning in life has in promoting a better life, increasing substance abstinence, decreasing psychiatric

symptoms, decreasing stress, and assisting with life functioning (Brassai et al., 2012; Diaz et al., 2014; Horton et al., 2016; Martin et al., 2011; Ortíz, & Flórez, 2016; Robinson, Krentzman, Webb, & Brower, 2011), is vital to those in addiction recovery as well as those that are struggling with comorbidities.

Meaning in life has provided a shield for individuals struggling with SUDs (Diaz et al., 2014). The high rates of COD of depression and SUDs have been known throughout the SUD treatment community, but Diaz et al. study's findings also supported this information with 63% of their studies population reporting clinical levels of depressive symptoms. This supports the importance of investigating the COD depressive symptoms that I addressed in my study. As pointed out by Horton et al. (2016) increasing the knowledge and understanding around the risk and protective factors associated with SUDs is a pivotal factor in treatment and long-term recovery. SUDs are intertwined with risky behaviors, increasing meaning in life has been shown to have an inhibitory effect on risky behaviors (Steger, Fitch-Martin, Donnelly, & Rickard, 2015), which may be beneficial in assisting individuals struggling with SUDs and comorbidities.

Individuals dealing with a short-term catastrophe experience a decreased quality of life and self-efficacy (Drescher et al., 2012). Moreover, individuals dealing with addiction and comorbidities usually are dealing with a long-term (one year or more) catastrophe and thus have lost or negated most of their self-efficacy (Deane et al., 2012; McKay et al., 2013; Grella & Stein, 2013; Sugarman et al., 2013). Further, substance use in teens usually increases in response to stressors and psychological symptoms, thus

usually perpetuating the stressor or psychological symptoms (Skarstein et al., 2014; Skarstein, Lagerløv, Kvarme, & Helseth, 2016).

Daily events perceived as negative can disrupt an individual's meaning system, especially when connected to a life value domain (Machell, Kashdan, Short, & Nezlek, 2015). Most of those struggling with addictions continue to struggle with skewed behavioral economies thus are unable to connect to most of their life value domains (Bickel, Johnson, Koffarnus, MacKillop, & Murphy, 2014). Therefore, for those who suffer from addiction the increase in feeling meaningless is associated with an increase in suicidal ideation (Galek et al., 2015). Finally, recent research has shown a statistical significance between substance use and meaning in life with depression showing a strong positive correlation with meaning in life (Katsogianni & Kleftaras, 2015).

Spirituality

Spirituality, which has been associated with meaning in life, has shown to be an important component of SUD treatment (Diaz et al., 2014). Spirituality has been described as separate from religion and closely related to one's values, positive character traits and mental health states of peacefulness and hope (Awasthi et al., 2014; Diaz et al., 2014; Horton et al., 2016). Spirituality is a protective factor that relates to building interpersonal relationships, with others and with oneself, while undergoing addiction treatment (Horton et al., 2016).

Spirituality has played a large role in 12 step programs and many formalized treatment programs (Martin et al., 2011; Ortíz, & Flórez, 2016) and has been referred to as a dimension of meaning in life (Lyons, Deane, Caputi, & Kelly, 2011; Ortíz, & Flórez,

2016; Thompson, 2011). An absence of meaning in life increases substance use, which in turn increases SUD symptoms, which also influences comorbid symptoms; creating a repetitive cycle that most individuals struggling with addiction find hard to escape (Ortíz, & Flórez, 2016; Schnetzer, Schulenberg, & Buchanan, 2013). Lack of meaning in life is a large risk factor for youth struggling with substance use (Ortíz, & Flórez, 2016; Schnetzer et al., 2013). Whereas, other research has shown that through increasing perceived meaning in life there is a decrease in the use of a variety of substances (Martin et al., 2011; Ortíz, & Flórez, 2016).

Life dissatisfaction, which can relate to a lack of meaning in life, has shown a connection between high alcohol consumption and increased adverse psychiatric symptoms (Koivumaa-Honkanen et al., 2012). Individuals struggling with SUDs have exhibited a lack of meaning in life, which in turn created an increase in substance use (Ortíz, & Flórez, 2016). There continues to be a lack of understanding in the therapeutic community around the importance of addressing a person's addiction, comorbidities, and lack of meaning in life together. However, currently, no research focuses on the intertwined effect that both addiction and comorbidities have on one's perceived meaning in life or the possible relationship that may exist between these variables.

Counseling Field

Empirical research, which includes the field of counseling, has focused more on the presence of meaning in relation to various medical or life stage stressors without addressing the search for meaning (Cohen & Cairns, 2011; Dezutter et al., 2013; Sherman & Simonton, 2012; Steger, 2012). The field of counseling has focused on meaning in

relation to medical issues such as cancer, bereavement, group counseling, and from a theoretical approach (Gillies, Neimeyer, & Milman, 2014; Kunkel, Dennis, & Garner, 2014; MacKinnon et al., 2013; MacKinnon et al., 2016; Vos, 2016). The career counseling field has also focused on meaning in relation to bringing meaning to one's career and life (Allan, Duffy, & Douglass, 2015; Miller & Rottinghaus, 2014). Adolescents and early adults have been researched due to each population being at key areas of life development (Datu & Mateo, 2015; Dezutter et al., 2013; Steger, Fitch-Martin, Donnelly, & Rickard, 2015).

While the counseling field has focused on various aspects of the study I conducted, there has been no study that addresses all the key variables that I explored. The independent variables in this study were an individual's meaning and purpose, as well as the CODs symptoms of anxiety and depression. The dependent variable in this study was the attitudes about addiction. As pointed out above there are key elements within the current empirical research that are missing and need exploration could assist the counseling and counselor education fields.

Summary

I included a discussion around the literature search strategy followed by a review of the theoretical framework that will guide this dissertation. I discussed the recent literature that supports the approach and direction of this study on the importance of understanding the dynamics amongst meaning, CODs, and addiction beliefs. The literature review covered the current understandings that pertain to this study around SUDs and comorbidities, meaning, spirituality, and purpose. However, the literature

does not explore the importance of understanding the effect and role logotherapy has when looking at addiction recovery, comorbidities, and attitudes and beliefs about addiction. In Chapter 3, I provide a description of this study's design, sample, instrumentation, data analysis, and ethical considerations.

Chapter 3: Research Method

Introduction

In this chapter, I provide a description of this study's design, data analysis, and ethical considerations. An overview of the study's design includes a rationale for the research design as well as the archival data that I used. I discuss the population, sample, sampling procedure, instrumentation, and archival data access. I explain the operationalization of constructs, threats to validity, and ethical procedures that are factors in the study. My purpose for this archival quantitative study was to explore the relationship between a combination of meaning and symptoms of anxiety and depression with attitudes towards substances among persons receiving substance use disorder (SUD) treatment. Through the research question, I also addressed the extent to which meaning and co-occurring diagnoses (CODs) of anxiety and depression predict an individual's attitudes about addiction.

Research Design and Rationale

A researcher using an archival research method attempts to identify interpretations that can be made about a sample population from a snapshot in time. This requires concise explanations of a research design's conceptual and operational details (Bryman, 2015; Fowler, 2013; Frankfort-Nachmias, Nachmias, & DeWaard, 2015). A research design is a blueprint that provides the foundation for the research to address the focused research questions (Martin & Bridgmon, 2012). In this archival study, I used secondary data that provided information regarding the capability of predictability of the variables (Martin & Bridgmon, 2012).

In addressing the appropriate methodology for the study I conducted, I assessed various methods and determined the best fit for my study. A qualitative approach requires a focus more on the lived experience of the clients (Patton, 2015) instead of an understanding of the relationship between the variables; in this study, I explored relationships between variables. An experimental study creates challenges related to internal validity threats, human error, and various ethical issues (Frankfort-Nachmias et al., 2015). Whereas the focus for experimental studies is to assess comparisons between groups (Frankfort-Nachmias et al., 2015), I explored relationships between meaning and symptoms of CODs depression and anxiety during SUD treatment. A cross-sectional analysis provides an opportunity to conduct a study focused on analyzing data collected at a specific point in time, creating a snapshot that assists in removing assumptions (Frankfort-Nachmias et al., 2015). A cross-sectional analysis is one of the most widely used research designs in the social sciences (Frankfort-Nachmias et al., 2015). A cross-sectional design provided an opportunity to explore relationships between variables, which was important as I was focused on exploring the relationships between meaning and symptoms of CODs depression and anxiety during SUD treatment while also focusing on exploring if that meaning relates to attitudes towards substances (Frankfort-Nachmias et al., 2015).

Due to the complex nature of substance abuse treatment, actively collecting data during this period could create challenges that could be both dangerous and unethical (Frankfort-Nachmias et al., 2015). Information about individuals undergoing substance abuse treatment is protected under the Confidentiality of Substance Use Disorder Patient

Records (2017), which can create complications for researchers. Individuals with a SUD are also a vulnerable population; some research avenues may cause distress, which is highly concerning for an already vulnerable population. Using archival data avoids these concerns.

While there are many approaches to quantitative research, finding a method that supports the research question being addressed is important. An archival design is an unobtrusive research method that assists in mitigating researcher bias and the Hawthorne effect (Frankfort-Nachmias et al., 2015). Electronic health records (EHRs) can provide a wealth of information for possible research (Coorevits et al., 2013). Accessing vulnerable persons for research can be difficult and challenging. Using EHRs allows a researcher to utilize these records as archival data to examine health concerns for specific populations (Coorevits et al., 2013; Sloboda, McKetin, & Kozel, 2005).

EHRs serve as a comprehensive surveillance system that gathers a vast array of information about clients during their treatment that is contained in the client's chart (Coorevits et al., 2013; Sloboda et al., 2005). These data are vital for understanding emerging trends, continuing challenges, and areas of concern or progress (Sloboda et al., 2005). Due to the nature of the therapeutics provided to clients, EHRs used by substance use treatment facilities are more likely to gather information on possible vulnerable populations (Sloboda et al., 2005). Using the information contained within EHRs for clinical research can optimize clinical developments by increasing understanding (Coorevits et al., 2013). The information I used for my study was extracted from clients'

EHR charts that were de-identified and contained only information specifically relating to this study.

The data I used in this study were previously collected from clients' EHRs as part of their participation in a treatment program, making the data archival. Researchers often overlook EHRs as a source of vital information (Vartanian, 2011). Mining archival data employs unobtrusive collection methods by removing the researcher from having direct contact with participants during the events under study (Frankfort-Nachmias et al., 2015). Which is beneficial in decreasing the possibility of researcher bias. The Hawthorne effect involves a reactivity in which individuals alter aspects of their behavior in response to being observed (Frankfort-Nachmias et al., 2015; McCambridge, Witton, & Elbourne, 2014). By using unobtrusive data collection methods with archival data, I also decreased the costs associated with my study, as I did not have to travel or offer incentives to study participants (Frankfort-Nachmias et al., 2015). Archival data allow for a greater sample size due to decreased data collection time constraints (Frankfort-Nachmias et al., 2015). By using archival data, I was able to employ a large sample size for the study I conducted.

While researchers thus far have investigated certain aspects of meaning and anxiety and depression for individuals struggling with SUDs, no current research provides empirical evidence of the relationship between meaning and CODs of anxiety and depression and the effect that they may have on an individual's attitudes about addiction as well as their mental health symptoms. In Chapter 2, I discussed the recent correlational research that has used similar variables as I did in the study I conducted.

However, while previous researchers have addressed various variables that I used for this archival data study, no current research addresses all the variables focused on in this study. I used cross-sectional archival data to conduct a correlational analysis, which allowed for the exploration of relationships between variables (see Frankfort-Nachmias et al., 2015).

Research Questions and Hypotheses

In this study, I employed an archival study design to address the following research question:: To what extent does meaning as measured by the Brief Personal Meaning Profile (PMP-B; Wong, 1998, 2012), and CODs severity of anxiety, as measured by the Burns Anxiety Inventory (BAI; Burns, 1999), and severity of depression, as measured by the Beck Depression Inventory II (BDI-II; Beck et al., 1996), relates to an individual’s attitudes about addiction as measured by the Brief Substance Abuse Attitude Survey (BSAAS; Chappel et al., 1985)?

Null hypothesis (H_0): There is no statistically significant correlation between a regression model including meaning as measured by the Brief Personal Meaning Profile (PMP-B; Wong, 1998, 2012), and CODs severity of anxiety, as measured by the Burns Anxiety Inventory (BAI; Burns, 1999), and severity of depression, as measured by the Beck Depression Inventory II (BDI-II; Beck et al., 1996), and an individual’s attitudes about addiction as measured by the Brief Substance Abuse Attitude Survey (BSAAS; Chappel et al., 1985) among persons receiving treatment for drug and alcohol addiction.

Alternative hypothesis (H_1): There is a statistically significant correlation between a regression model including meaning as measured by the Brief Personal Meaning Profile

(PMP-B; Wong, 1998, 2012), and CODs severity of anxiety, as measured by the Burns Anxiety Inventory (BAI; Burns, 1999), and severity of depression, as measured by the Beck Depression Inventory II (BDI-II; Beck et al., 1996), and an individual's attitudes about addiction as measured by the Brief Substance Abuse Attitude Survey (BSAAS; Chappel et al., 1985) among persons receiving treatment for drug and alcohol addiction.

The independent variables were meaning and purpose, as measured by the PMP-B (Wong, 1998, 2012), and symptoms of anxiety and depression, as measured by the BAI (Burns, 1999) and the BDI-II (Beck et al., 1996), respectively. The dependent variable was attitudes about addiction, as measured by BSAAS (Chappel et al., 1985).

Methodology

Population

The target population for this study was any adult in the United States who sought treatment for CODs, including persons from all races, genders, religions, and socioeconomic statuses as substance abuse is a disease that does not discriminate (National Institute on Drug Abuse [NIDA], 2015). Individuals seeking treatment for CODs are a vulnerable population and thus require special protections (Sieber & Tolich, 2013). NIDA (2015) reported that over the past year, fewer than 10% of adults with CODs received treatment for their diagnoses and more than 50% did not receive any treatment (as cited in Han, Compton, Blanco, & Colpe, 2017). The National Epidemiological Survey on Alcohol and Related Conditions (NESARC) was a longitudinal survey that collected information related to substance use, psychiatric disorders, risk factors and consequences that identified a need to understand further the

substance abuse population, the struggles that exist with this population, and ways in which to begin addressing these problems (Hasin & Grant, 2015). The target population size for the study I conducted was 119, which was rounded up to 150.

Sampling

I used a random sampling strategy with the archival data, as once I received the archival data, I chose every third record until reaching the necessary sample size for this study. This allowed for the best access to the most relevant data (see Frankfort-Nachmias et al., 2015; Sheperis, Young, & Daniels, 2010). The primary goal of a sampling strategy is to obtain a representative sample from the population from which the sample is being drawn (Frankfort-Nachmias et al., 2015). The archival data I used in this study was a convenience sample that was previously collected by the treatment center located in the western part of the United States. The archival data were initially collected via a convenience sampling strategy, which is a nonrandom sample, meaning there is no guarantee that all members from the population have an equal chance of inclusion (Frankfort-Nachmias et al., 2015). A convenience sample allows a researcher to select a sample that is readily available due to the participants being identified, willing, and available (Frankfort-Nachmias et al., 2015).

According to the mission statement of the treatment center, their focus is on empowering individuals and families suffering from addiction to celebrate life through lasting solutions by supporting a continuum of care (residential [RTC], partial hospitalization [PHP], intensive outpatient [IOP], and general Outpatient [GOP]; The Treatment Center, n.d.a). The treatment center reports that the staff, are highly trained

and educated individuals, functioning from a foundation of evidence-based practices that highlight their expertise, knowledge, and understanding about the disease of addiction and co-occurring disorders (The Treatment Center, n.d.b, n.d.c). The treatment center's treatment approach integrates a 12-step connection with a meaning and purpose foundation that focuses on reclaiming a meaningful life through healing and hope while increasing a client's purpose in life (The Treatment Center, 2017). The treatment center assist adults, age 18 or older that assists individuals struggling with addiction, co-occurring disorders, and severe psychiatric issues (The Treatment Center, n.d.a, n.d.b, n.d.c).

The study sample consisted of both males and females who meet the *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.; *DSM–5*; American Psychiatric Association [APA], 2013) criteria to be diagnosed with a SUD. Any clients not meeting this criterion were not be included in the study population. Members of the study sample must have also meet DSM-5 criteria for an anxiety or depressive disorder, although they may not have a diagnosis of an anxiety or mood disorder due to not meeting the criteria of being substance free for six months (American Psychiatric Association, 2013). The archival data collected from the participants was from their admission into the treatment center's program; which included admission information from RTC, PHP, and IOP programs.

I obtained the sample of archival data records from a single dual diagnosis treatment center, located in the western part of the United States. The sample data was extracted anonymously from archival records due to the protected status of individuals

struggling with substance use and mental health disorders and the protections required for IRB approval to work with this population for dissertations. Also, since the data was previously collected, it is practical and useful to utilize this archival data to assess this vulnerable population.

Members of the sample were referred to treatment by a variety of avenues including self-referral, family intervention, employer, insurance company, other treatment centers, and medical personnel. Typically, most clients that receive services are residents of the state where the treatment center is located , usually within the surrounding 300 miles from this specific treatment center. Most, of the clients, use private insurance or pay out of pocket for the services provided, while this specific treatment center does not serve patients with Medicaid or Medicare as an insurance provider. The sample consisted of only individuals that were involved in the admissions process into the specific treatment program. The archival data from individuals that meet the previously discussed sampling criteria included specific demographic information (gender, age range, relationship status, drug of choice, treatment episode) and the clients answers to the following assessments including the Brief Substance Abuse Attitude Survey, Beck Depression Inventory II, Burns Anxiety Inventory, and Brief Personal Meaning Profile (PMP-B). This information was included in the sample data file.

The following describes the process in which patients are admitted and assigned to treatment programs at the specific treatment center; therefore, these are the procedures by which participants become a member of the sampling frame for this study. Initially, potential clients, parties of interest or referral sources make initial contact to the treatment

center at which point the speaks with a member of the admissions team at the specific treatment center. In some cases, this initial meeting occurs as a face to face session, at the main treatment center, office, a jail, a detox unit, or a courthouse. After initial contact, the admissions representative would conduct an initial screening interview; where the representative collects specific information from the potential client including the reason for treatment, substance use and treatment history, mental health issues and suicidality, work and home situation, relationships, and legal issues. After the initial screening interview, various team members including but not limited to the admissions manager, medical director, and clinical director review the potential client's information. After approvals from all the necessary directors, the potential client can engage in the admissions process at the recommended level of care. The admissions representative provides any clients not approved for admission referral information for appropriate assistance based upon current need and situation as described in the specific treatment center admissions protocol.

The admission criteria for treatment with this single dual diagnosis treatment center, located in the western part of the United States, focuses on identifying high-risk behaviors and assessing the appropriate amount of clinical intervention and interaction needed to address the high-risk behaviors identified. Admission criteria for residential or inpatient treatment focus on medical stabilization; a patient must have a primary diagnosis of a substance use disorder and is in imminent danger of relapse (The Treatment Center, 2017). Also, the patient cannot exhibit imminent risk of significant withdrawals that cannot be safely managed outside of a hospital setting and can safely

participate in treatment without exhibiting a need for 24-hour hospital care (The Treatment Center, 2017). Patients cannot be significantly impaired (either from substance use or COD), be suicidal or express suicidal ideation, or have a COD that further supports a need for medical stabilization in a structured 24-hour care setting (The Treatment Center, 2017).

Patients must exhibit a need for 24-hour care exhibiting signs, symptoms, emotions, behaviors, or concerns that would elicit the need for constant structured care and support (The Treatment Center, 2017). Patients may be unable to engage in activities of daily living (e.g., feeding, dressing, bathing, ambulating), present with extreme emotional instability or dysregulation when dealing with everyday life stressors, or display symptoms or behaviors that require 24-hour structured care for support and treatment (The Treatment Center, 2017).

For admission criteria, to the day or PHP treatment programs, persons must demonstrate the need for frequent clinical contact (five days per week) while having a primary diagnosis of a substance use disorder that is in imminent danger of relapse (The Treatment Center, 2017). For admission to the PHP program, patients should exhibit the need to learn, enhance or practice skills (e.g., medication management, known medical issue that requires frequent but not daily medical contact, emotional/behavioral issues, impaired performance in daily functioning) (The Treatment Center, 2017). The patient will have some risk for relapse but will be able to attain times of sobriety in between relapses even if for short periods of time (The Treatment Center, 2017). The patient may demonstrate minimal to moderate withdrawal symptoms that do not require significant

medical assistance, as anything more severe would warrant an in-patient or medical detox support (The Treatment Center, 2017). Patients report struggling with relapses, emotional instability or dysregulation when dealing with everyday life stressors or display new symptoms or behaviors that require frequent daily contact (The Treatment Center, 2017).

Admission criteria for IOP treatment focus on a need for clinical contact on a reasonable basis (four days/nights per week) while having a primary diagnosis of a substance use disorder and are not currently in imminent danger of relapse (The Treatment Center, 2017). A majority of clients entering IOP will have some degree of sobriety, as they will not have been using on a daily basis but will still be struggling with relapses on a varying degree (The Treatment Center, 2017). The patient is not demonstrating withdrawal symptoms that need the support of medical interventions (The Treatment Center, 2017). Patients report ongoing or new struggles and challenges with substances that are challenging their everyday lives, as well as issues with day to day function that would benefit from therapeutic contact on a minimal level (The Treatment Center, 2017). For this study, I used sample data that includes admission into all levels of care (Inpatient, PHP, and IOP) at the specific treatment center.

Sample Size

I conducted a GPower *a priori* analysis (Buchner, Faul, & Erdfelder, n.d.) for an *F*-test for a multiple linear regression to address the appropriate sample size that is needed for this study. The standard psychological research practice is to have an alpha of .05; however, for a more rigorous test a .01 alpha calculation would be used, I used

utilizing an alpha of .05 (Trochim, Donnelly, & Arora, 2016). A statistical power or probability of 80% is most widely accepted; to decrease the chance of a false negative or Type II error, I used a power or 95% (Burkholder, 2012). In determining the sample size needed to achieve an effect size of 0.15 (85%) or a medium f^2, with an alpha of .05 which provides the probability of a 5% chance that a Type I or Type II error may occur, with a power of .80 which will provide an 80% chance that an effect will be detected if one genuinely exists (Buchner et al., n.d.). The number of predictors was entered as three, for the three variables (i.e., meaning, as measured by the PMP-B [Wong, 1998, 2012]; depression, as measured by the BDI-II [Beck et al., 1996]; and anxiety, as measured by the BAI [Burns, 1999]) were be used as independent variables for the research question. The *a priori* power analysis results showed that the required sample size for the study was 119, which was rounded up to 150.

In selecting the data for my study, I used a sampling of 150 patient records. The treatment center provided me with a sample of 400 patient records, this ensured that all patient records used in this study were complete. Initial data analysis is a process for data inspection and screening before any analysis being conducted (Huebner, Vach, & le Cessie, 2016). Proper initial data analysis allows for the identification of any data inconsistencies which warrant a resolution (Huebner et al., 2016). The treatment center randomly selected 400 patient records from the available overall dataset of over 1200. The treatment center selected every third complete admission patient record until reaching a total of 400. Upon receiving the dataset, I conducted the initial data analysis. The initial data analysis ensured that all patient records included in this study were

complete, those patient records that appear incomplete or invalid (i.e., all no's or choosing the same option for all responses) will be removed from the sample. I then selected every third record, which required cycling through the available records multiple times until I attained a sample of 150 records for this study.

Archival Data Procedures

The specific dual diagnosis treatment facility has been participating in their data collection effort since 2014 with the goal of continuing to review and analyze the data for research and publication and for driving continued high standard treatment at the facility. The treatment center continues to collect data but at this time has not published any of their research information. The treatment center currently utilizes the data to address areas of treatment planning, training, and program achievement.

All clients admitting into the treatment facility are given both a written and verbal explanation regarding the data collection effort during which the client is also informed that participation is voluntary and can be removed at any time. The participants are informed, in writing (see Appendix B "Data Consent Form"), that all identifying information is removed from all data being collected. The treatment center educates clients on the purpose of the data being collected, as the primary goal is to provide information to further the field of addiction and dual diagnosis knowledge and treatment.

Staff members provided participants with the paper and pencil or online versions of the assessments to be filled out. The participants were not given a specified time in which the assessments, had to be completed but were instructed that once they began the assessments they must complete all the questions while completing the assessments the

participants would remain in the front office of the residential or outpatient building. Staff informed the participants that assistance was available if they had any questions or concerns about the assessments. Staff received training to assist participants, should the need arise, that focused on ensuring that all assistance and answers were given in a systematic way that was given by the various assessments (i.e. if reading were an issue staff would read the question just as it had been written on each assessment, staff would assist participants in responding to assessments based on the instructions of each assessment).

I used a sample of 150 patient records from the overall dataset. The treatment center pulled a sample of 400 patient records, providing every third admission patient record until reaching a total of 400 patient records. After receipt of the 400 patient records, I sorted through the records to include only records with complete valid answers. Patient records that appeared incomplete or invalid due to shown responses (i.e. all no's or choosing all option 4) were removed from the sample, then selected every third patient record until I attained a sample of 150 patient records.

Data Access

After several meetings access to the data was provided by the executive board of the specific treatment center, which included the Chief Executive Officer, Chief Financial Officer, and the Executive Director. Permission was granted for this study by the executive board that the Executive Director would be the contact source after permission was granted (see Appendix A "Data Use Agreement"). The executive board gave both verbal and written permission to use the data, a written contract was created between the

Executive Director working under authorization by the executive board of the specific treatment center and me. The data was transferred via encrypted data transfer onto a USB drive from the Executive Director. All information contained in the data was coded by the treatment center, thus removing any potentially identifiable information. The data contained information obtained from all admissions within the single treatment centers programs for the specific date range.

Only the Executive Director and I had access to the specific data that I used in this study. Upon receiving the USB drive from the Executive Director, I was given the password for access to the encrypted drive's information. I stored the USB drive in a secure lock box in my home and only used the USB drive when conducting the data analysis for this study. The USB drive (with all archival data on it) was physically returned to the Executive Director upon completion of the data analysis.

Instrumentation

The data from the specific treatment center that I used for this study contained five standard assessments given throughout a client's treatment; they are the Brief Substance Abuse Attitude Survey (Veach & Chappel, 1990); Beck Depression Inventory II (BD-II; Beck et al., 1996), Burns Anxiety Inventory (BAI; Burns, 1999), and the Brief Personal Meaning Profile (PMP-B; McDonald et al., 2012). The archival data that I used contained the participant's responses to these assessments. The initial assessments that were used in the study I conducted were given when the participants were admitted into the treatment center's program, which includes all levels of care (RTC, PHP, and IOP]). Patients' completion of these assessments provided an opportunity for self-reporting

regarding their attitudes and views about substances, personal perception of meaning and purpose in their life as well as their symptoms of anxiety and depression. The treatment center used these assessments to assess and address ongoing symptoms and efficacy of the treatment program.

Variables

The archival study design I used focused on previously collected interval data of adults (18 years and older) that underwent treatment at this specific dual diagnosis treatment facility. The archival data that I used was interval in nature, which allowed for a correlational and cross-sectional analysis to explore the possible relationships between the variables. The variables, both independent and dependent, are explained in more detail below.

Independent variable: Meaning. The independent variable of personal meaning was assessed using the Brief Personal Meaning Profile (PMP-B; Wong, 1998, 2012). The PMP-B (Wong, 1998, 2012) focuses on four major areas of life including religion, relationship, achievement, and self-transcendence that have shown significance in developing meaning in life (McDonald et al., 2012). Permission to use the PMP-B was given from Dr. Paul Wong (See Appendix C). A sample question is “I have learned to live with suffering and make the best of it” (McDonald et al., 2012; Wong, 1998, 2012). The PMP-B has 21 items; it is a shortened version of the Personal Meaning Profile (PMP) which contains 57 items. (McDonald et al., 2012; Wong, 1998, 2012). Individuals complete the PMP-B by responding to a 7-point Likert scale (from 1: Not at all to 7: A great deal) (McDonald et al., 2012; Wong, 1998, 2012). The scores on the PMP-B can

range from 21 to 147 points, with a higher score denoting having a higher meaning in life. The PMP-B has shown significant test/re-test reliability and a Cronbach's alpha of 0.84; (McDonald et al., 2012; Wong, 1998, 2012). The test-retest reliability of the PMP-B is 0.73 (McDonald et al., 2012; Wong, 1998, 2012). The PMP-B has been shown to positively correlate with other meaning measures and scales such as the Life Regard Index-Revised (Mascaro & Rosen, 2005), Spiritual Meaning Scale (Mascaro, Rosen, & Morey, 2004), and the BDI-II (Beck et al., 1996). The PMP-B has been used in numerous doctoral studies including Corner (2003), Daum & Wiebe (2003), and Gallant (2001). The PMP-B has been used to examine meaning in life of Dutch cancer patients (Jaarsma, Pool, Ranchor, & Sanderman 2007), university students at a Canadian religious university (Klaassen & McDonald, 2002), undergraduates at a southwestern US state university (Mascaro & Rosen, 2006), and American psychologists (Kernes & Kinnier, 2008).

Independent variable: Anxiety. The independent variable of anxiety was measured by the Burns Anxiety Inventory (BAI; Burns, 1998, 1999). Permission to use the BAI was given from Dr. David Burns (See Appendix D). The BAI is a 33-item assessment of anxiety in adults. The survey measures three components of anxiety as felt by respondents in the past week. These components are (a) anxious feelings; an example item is "Feeling tense, stressed, uptight, or on edge;" (b) anxious thoughts; an example item is "[Having] racing thoughts or having your mind jump from one thing to the next;" and (c) physical symptoms; an example item is "Choking or smothering sensations or difficulty breathing." Individuals complete the BAI by answering the 33 items using a 4-

point Likert scale (i.e., 0 = Not at all, 1 = Somewhat, 2 = Moderately, 3 = A lot). The scale scores on the BAI can range from 0 to 99, with a higher score indicating a higher level of anxiety. The BAI has high internal consistency and convergent validity and is strongly correlated when compared with similar scales such as the Burns Anxiety Inventory, Hopkins Symptom Checklist-90 (SCL-90), Postpartum Specific Anxiety Scale (PSAS), (Burns & Eidelson, 1998; Fallon, Halford, Bennett, & Harrold, 2016; Ortuño-Sierra, Rodríguez, Debbané, & Fonseca-Pedrero, 2015; Persons, Roberts, Zalecki, & Brechwald, 2006). BAI has a high Cronbach's alpha ranging from 0.90 to 0.95 (Burns, 1989, 1999). The BAI has also shown high test/re-test reliability across a wide range of populations including university students enrolled at Chinese, American, European, and Canadian schools), community samples, the lesbian, gay, bisexual, transgender and queer community (LGBTQ), and medical patients (Barbosa et al., 2013; Budge, Rossman, & Howard, 2014; Burns & Eidelson, 1998; Ortuño-Sierra et al., 2015).

Independent variable: Depression. The independent variable of depression was measured using the Beck Depression Inventory-II (BDI-II; Beck et al., 1996). The 21-item BDI-II measures indicators and severity of depression symptoms for persons aged 13 years old and older (Beck et al., 1996). Permission to use the BDI-II was given by Pearson Clinical the owner of the legal rights to the BDI-II (See Appendix E). In the permission granted from Pearson Clinical, it was requested that "no actual assessment test item or discussion of any actual test items be included" (See Appendix E). Individuals complete the BDI-II by selecting a response on the 4-point Likert scale,

which ranges from 0 to 3. (Beck et al., 1996). The BDI-II scores can range from 0 to 63, a higher score denoting higher depression (Beck et al., 1996).

Numerous authors have used the BDI-II to assess the severity of depressive symptoms in a variety of populations (Barral et al., 2016; Jakubczyk et al., 2016; Koball et al., 2016; Rupp et al., 2016; Sanvicente-Vieira, Kluwe-Schiavon, Corcoran, & Grassi-Oliveira, 2017). The BDI-II has high reliability, with Cronbach alphas between .90 to .94, which supports the assessment measuring depressive symptoms (Beck et al., 1996; Dere et al., 2015). The BDI-II has been found to be removed from racial bias and consistent across cultures, even cultures which are considered to somaticize depression (Dere et al., 2015; Sashidharan, Pawlow, & Pettibone, 2012). Numerous studies have documented the construct validity of the BDI-II (Beck et al., 1996; Steer, Ball, Ranieri, & Beck, 1997).

Dependent variable: Attitudes toward substance abuse. Attitudes toward substance abuse were assessed using the Brief Substance Abuse Attitude Survey (BSAAS; Veach & Chappel, 1990). Permission to use the BSAAS was given from the copyright clearance center (See Appendix F). The BSAAS has 25 items that pertain to an individual's attitudes and beliefs about substances; the BSAAS is a widely-used measure to assess ongoing attitudes towards substance use and abuse (Chappel et al., 1985). The BSAAS was derived from statistical studies based on the Substance Abuse Attitude Survey (SAAS); this assessment is used with a variety of populations, due to the ability to be most sensitive in identifying changes in attitudes about substances (Veach & Chappel, 1990). The BSAAS measures the attitudes and beliefs around substances by focusing on

five subscale categories: permissiveness (i.e. lenient and accepting attitude towards substance use and misuse), treatment intervention (i.e. alignment regarding substance use and misuse in the framework of treatment and intervention), non-stereotyping (i.e. disbelief of common societal stereotypes of substance use and users), treatment optimism (optimistic perception of treatment and the probability of a successful outcome), and non-moralism (i.e. deficiency and evading of moralistic perspective when thinking about use and substance users) (Veach & Chappel, 1990). A sample question from the BSAAS is, "Lifelong abstinence is a necessary goal in the treatment of alcoholism." The BSAAS uses a 5-point Likert scale (i.e., 1-Strongly Disagree, 3-Undecided, 5-Strongly Agree).

The BSAAS scores can range from 25 to 125 points, created by adding all the individual scores together. The higher the total score denotes a stronger attitude against using substances. Research shows that the BSAAS has both content and face validity due to it consistently and accurately measuring what it should (Chappel et al., 1985; Linden, 2010). The BSAAS inter-item reliability has ranged from a Cronbach's alpha of .63 to a Cronbach's alpha of .77 between .63-.77 (Chappel et al., 1985; Linden, 2010).

Threats to Validity

Threats to validity are concerning because the effect that can occur with the data and results of the study (Creswell, 2009). The challenges associated with archival data are the lack of ability to control certain aspects of the archival data due it already being collected by other individuals (Rudestam & Newton, 2015). Since the archival data was already collected there is the possibility that the data will be unreliable or collected with poor standards (Rudestam & Newton, 2015). Another disadvantage that should be

discussed is the disbelief that archival data creates an easy version of research due to the lack of data collection necessary (Aamodt, 2015). There is also a disadvantage due to the inability to detect and correct any data errors that become apparent (Aamodt, 2015).

There is a need for a larger sample size due to the ability to provide a stronger confidence interval allowing for a stronger overall validity of the study (Frankfort-Nachmias et al., 2015). Since all individuals admitted into the treatment center's program were included in the study's population, there could be biases due to the limited study population being that of clients of this specific treatment center (Creswell, 2009). This study used archival data, so the ability to correct for specific threats of internal validity is minimal (Creswell, 2009). Threats to internal validity discredit the statistical chance that the outcome is a result of the independent variable/treatment (Creswell, 2009). The internal validity threats that could be controlled were that of instrumentation, testing, selection, and mortality (Creswell, 2009). The internal testing validity threat can also affect the external validity of the study by decreasing the studies likelihood of generalizability (Campbell & Stanley, 1963; Creswell, 2009).

Ethical Procedures

In utilizing archival data, a vulnerable population may be analyzed if there has been de-identification of all data pieces that were collected (Rollins, O'Neill, Davis, & Devitt, 2014). Archival data also does not require written consent from all participants due to the data being previously collected by a separate party according to Rollins et al. (2014). According to Walden University's Institutional Review Board (IRB), research ethics play an essential role in any research conducted by the university, as it is important

to not place any individual or population at unnecessary risk (Walden University, 2011). A benefit to utilizing archival or secondary data is that there are limited risk or safety issues to participants and it limits any pressure that participants would feel (Walden University, 2011). The Walden IRB application requires that there be minimal risk to all study participants; the U.S. federal guidelines require that the risk not be higher than any risks encountered on a daily basis (Walden University, 2010).

The data obtained from the treatment center had all personal identifying information removed from the dataset before receipt was taken via the USB drive. This protected any potential persons from harm, due to this information containing sensitive material for a vulnerable population. The demographic information that was contained in the dataset did not have any identifying characteristics included which allowed for the protection of the persons information but also removed any harm that may come from researching the dataset. The dataset was provided via encrypted USB drive and was kept under two locks; a small fireproof desk safe and locking bookshelf.

Data Analysis Plan

To explore the following research question: RQ1: To what extent does meaning as measured by the Brief Personal Meaning Profile (PMP-B; Wong, 1998, 2012), and CODs severity of anxiety, as measured by the Burns Anxiety Inventory (BAI; Burns, 1999), and severity of depression, as measured by the Beck Depression Inventory II (BDI-II; Beck et al., 1996), relates to an individual’s attitudes about addiction as measured by the Brief Substance Abuse Attitude Survey (BSAAS; Chappel et al., 1985)?

I entered the archival data which included the patient's gender, age, ethnicity, and substance most abused; as well as information from the administered instruments (BAI, BDI-II, BSAAS, and PMP-B) into an SPSS 24.0 data file, which I kept on a jump drive. Once the data was entered, I reviewed the dataset to check for and correct any entry mistakes. I requested the treatment center appropriately select 400 cases that fit the study criteria; the treatment center utilized a systematic random case selection of every third case file being included until reaching the requested total of cases. I reviewed the data for missing variables and outliers. I ran a Little's test to determine if any data are missing at random (MAR), missing completely at random (MCAR), or missing not at random (MNAR) (Garson, 2015). If a case is missing >= 80% of data and data are MCAR or MAR or if a case has >= 25% of data and data are MNAR I removed the case and replaced it with another case from the dataset (Garson, 2015).

I checked for univariate outliers using the SPSS outlier function. I found any multivariate outliers using the SPSS Mahalanobis distance function (Field, 2013). If I found any outliers, I winsorized (i.e., replace with the next lowest or highest value; Field, 2013) them. I computed study scales by adding the scale items together to obtain a total survey score for each survey variable (PMP-B, BDI-II, BAI, and BSAAS). I computed descriptive statistics for the participant variables. I reported the frequencies and percentages for categorical variables, such as gender and substance most abused, and the mean, standard deviations, and minimum and maximum scores for interval/ratio variables, such as age. I reported the mean, standard deviations, and minimum and maximum scores of the study assessments.

It is important to test if the scale data meet or violate the assumptions for regression analyses (Field, 2013). I tested if the scale data meet the assumption of normality by calculating scale $z_{skewness}$ scores (i.e., skewness value divided by skewness standard error; Kim, 2013), along with scale z_{excess} scores (i.e., excess kurtosis divided by skewness standard error; Kim, 2013). Kim (2013) stated that for a data set that contains between 50 and 300 cases, a $z_{skewness}$ value greater than 3.29 indicates that the assumption of normality has been violated. An excess kurtosis should be zero indicating a normal distribution, a positive excess kurtosis or leptokurtic (distribution with a high peak), while a negative excess kurtosis or a platykurtic (distribution with a flat-topped curve) (Kim, 2013). Outliers are often the reason for a violation of normality (Kim, 2013). However, if I found the scale data to be skewed and the data did not have outliers, I would transform the variables (e.g., square root or log-linear transformation).

I tested for the assumption of homoscedasticity by plotting actual versus predicted residuals on a scatterplot (Field, 2013). If the scatterplot displays data points equally above and below the horizontal line, I knew that the homoscedasticity assumption is met. Little can be done if this assumption is violated, but linear regression is robust against the violation of homoscedasticity (Field, 2013). I tested for the assumption of linearity between the independent and dependent variables by computing a series of probability (P-P) plots. The assumption of linearity is met if the data points align on a diagonal (Field, 2013).

I knew to run the linear regressions if this assumption is violated, and then state this as a limitation of the study. I tested for the assumption of the absence of

multicollinearity by running a multiple linear regression to compute variance inflation factors (VIFS). Multicollinearity, another assumption for linear regression analyses, refers to a very high correlation amongst independent variables to the extent that they measure the same construct (Stangor, 2014). Variance inflation factors for each independent variable association will determine multicollinearity. This assumption is met if VIFs are < 4.00 (Stangor, 2014). The assumption of the absence of multicollinearity is if VIFs are less than 10.00 (Field, 2013). If this assumption is violated, I would run the multiple linear regression analyses with and without the variable(s) showing the highest degree of multicollinearity. I tested for the independence of errors assumption by computing Durbin-Watson values for each independent variable. This assumption is met if the Durbin-Watson values are between 1.00 and 3.00 (Field, 2013). A violation of the independence of errors is uncommon when the data used is not paired; and linear regression is robust against such a violation (Field, 2013).

Before performing the regression analyses for hypothesis testing, descriptive and preliminary inferential statistical analyses were conducted. Frequencies and percentages were reported for the demographic variables and covariates. The means, standard deviations, and maximum scores were reported for the study scales (i.e., PMP-B, BAI, BDI-II, BSAAS). Specific statistical tests were conducted to determine and address violations of assumptions for regression analyses (Stangor, 2014). The assumption of normality in the distribution of scale scores were determined by calculating scale skewness scores (i.e., skewness value divided by skewness standard error). Homoscedasticity is an assumption that pertains to the equality of residual errors (i.e.,

errors are constant) and was tested by the plotting of residuals using scatterplots. If the data points displayed an equivalent distribution above and below the horizontal line, this assumption has been met (Stangor, 2014).

Summary

I provided a description of this study's design, sample, instrumentation, data analysis, and ethical considerations. An overview of the study's design was covered which included a rationale for the research design and archival data being used. I provided an explanation regarding the archival data access, population, sampling procedure, and instrumentation. I provided descriptions of the operationalization of constructs, threats to validity, ethical procedures, and data analysis. In Chapter 4, I provide a comprehensive description of the study's results and analysis.

Chapter 4: Results

Introduction

The main purpose of this archival quantitative study was to explore the extent to which meaning and co-occurring diagnoses (CODs) symptoms of anxiety and depression predict an individual's attitudes and beliefs about addiction. The null hypothesis (H_0) stated that there would be no statistically significant correlation between a regression model including meaning and CODs severity of anxiety and depression and an individual's attitudes about addiction among persons receiving treatment for drug and alcohol addiction. The alternative hypothesis (H_1) stated that there would be a statistically significant correlation between a regression model including meaning and CODs severity of anxiety and depression and an individual's attitudes about addiction among persons receiving treatment for drug and alcohol addiction. In this chapter, I discuss the archival dataset, the analysis, results, evaluations of statistical assumptions, and the impact on the hypothesis.

Data Collection

After receiving Institutional Review Board approval on March 22, 2018 (IRB approval number 03-22-18-0366362), I notified the executive director of the treatment center. The treatment center then retrieved the data that was going to be used in this study. Because they were archival data, there was no collection time needed. The treatment center gathered the data from their records with the following parameters: (a) an initial admission into residential or partial hospitalization or intensive outpatient services, (b) with co-occurring diagnoses symptoms of anxiety and depression, (c) and

met criteria for a SUD. The data elements included a level of care for admission, gender, age range, race/ethnicity, relationship status, drug of choice, tobacco user, answers for the PMP-B (Wong, 1998, 2012), the BAI (Burns, 1999), the BDI-II (Beck et al., 1996), and the BSAAS (Chappel et al., 1985).

The data from the treatment center included a total of 400 records. I received the data on an encrypted USB drive that was password protected. Prior to analyzing the data, I found that data coding would need to occur due to the format of the data provided. I conducted all data coding myself; for further information on the specifics of data coding, please refer to Table 1. I transformed all client responses (ex. 1= *Not at all*) from the independent variable instrument response into the exact numerical (ex. 1) equivalent Likert scale choice.

Table 1

Demographics Variables Coding Formatting

Demographic variables	SPSS coding
Level of care	RTC = 1; PHP =2; IOP =3
Gender	Female =1; Male =2
Ethnicity	White/Caucasian=1; Black/African American-=2; Asian/Pacific Islander=3; Hispanic/Latino=4; Prefer not to answer=5
Relationship status	Married=1; Divorced=2; Widowed=3; Separated=4; In a domestic partnership or civil union=5; Single, but cohabitating with a significant other=6; Single, never married=7
Drug of choice	Opiates (Lortab, Percocet, Oxycontin, Heroin, etc.) =1; Amphetamines (Adderall, Meth, etc.) =2; Alcohol =3; Cocaine =4; Benzodiazepines (Xanax, Klonopin, Valium) =5; Hallucinogens (Ecstasy) =6
Route of administration for drug of choice	Oral or taken by mouth =1; Insufflation or snorting =2; Inhalation or smoking =3; Intravenously or injecting =4
Previous treatment	Yes=1; No=2
Treatment episode	1-2 =1; 3-4 =2; 5-6 =3; Greater than 6 =4
Tobacco use	Yes=1; No=2

I waited to select the final sample from the 400 provided archival records so that all records were chosen at random. Upon completing all the data coding, I identified every third record to use for the study until reaching the needed sample size of 150 records. I reviewed the data by spot checking for any missing variables, and no missing variables were found. For accuracy, I also conducted a Little's test for any missing variables including MCAR, which resulted in a chi-square = 149.00 ($df = 13$; $p < .000$). Using z-score evaluations, with cutoffs of ±2 for all variables, no outliers were detected.

Results

I sought to discover if this study's independent variables may predict an individual's attitudes and beliefs about addiction. I obtained archival data from the specific treatment center located in the western part of the United States. After I coded and selected the specific data records, I used IBM SPSS Statistics Version 24 to complete a multiple regression analysis to explore the relationship between the dependent and independent variables. In this study, I included the independent variables of meaning and purpose and symptoms of anxiety and depression. The dependent variable was attitudes about addiction. The multiple regression analysis is assistive in identifying if a relationship between variables exists, while also providing the descriptive statistics for all variables included in the study and the correlations between variables (Field, 2013). In conducting the multiple regression analysis, the SPSS output included the sample descriptive statistics, hypothesis testing, the Pearson correlation test, and ANOVA. I also conducted frequencies for all independent variables and demographics. In the next

section, I present the results, including the descriptive statistics, assumptions, analysis, and findings from the analysis.

Sample Descriptive

The population in this study included individuals who (a) sought treatment services at the treatment center, (b) met criteria for a SUD with CODs symptoms of anxiety and depression, and (c) were initial admissions into residential or partial hospitalization or intensive outpatient services. The sample did not include anyone who did not meet the above criteria, which means this sample may not be generalizable to the public. The total participant size for this study was $N = 150$, and the total sample size needed for this study was $N = 150$. The demographic data included in the patient's record was the level of care for admission, gender, age range, race/ethnicity, relationship status, the drug of choice, tobacco user, and treatment episode.

The sample comprised of 60% males and 40% females (see Table 2), with a majority (38%) of the sample being between the ages of 25 to 34 years old. Those between the ages of 35 to 44 made up 27.3% of the sample, with only 18% of the sample being 45 or older (see Table 3). A bulk of the sample was single and never married (41.3%), 28% were currently married, and the remainder of the sample was either divorced, separated, or in a relationship including domestic partnership and/or cohabitation (see Table 4). Table 5 shows that there were slightly more tobacco smokers (55.3%) than nonsmokers (44.7%).

Table 2

Genders

	Frequency	Percent
Female	60	40%
Male	90	60%

Table 3

Age Range

	Frequency	Percent
18-24 years old	25	16.7%
25-34 years old	57	38.0%
35-44 years old	41	27.3%
45-54 years old	15	10.0%
55-64 years old	11	7.3%
65-74 years old	1	0.7%

Table 4

Relationship Status

	Frequency	Percent
Married	42	28.0%
Divorced	26	17.3%
Widowed	2	1.3%
Separated	10	6.7%
Domestic partnership	2	1.3%
Cohabiting	6	4.0%
Single	62	41.3%

Table 5

Tobacco Use

	Frequency	Percent
Yes	83	55.3%
No	67	44.7%

The primary drug of choice for the sample was closely split between opiates (41.35%) and alcohol (38%), with amphetamines (13.3%), cocaine (4%), benzodiazepines (2.7%), and hallucinogens (0.7%) making up the remaining amount (see Table 6). The primary method of use for an individual's drug of choice was oral, while 24.7% inhaled (insufflation/inhalation) their drug of choice, and 26.7% used intravenously (see Table 7). Seventy percent of the sample reported engaging in previous treatment for substance abuse, with 19.8% of the sample reporting previous engagement in three to four episodes of substance abuse treatment, while 9.5% of the sample reported that they were engaging in their sixth or greater substance abuse treatment episode (see Table 8). Admission into the residential (RTC) program made up 66.7% of the sample, while the day program or partial hospitalization (PHP) admission made up 19.3% of the total sample with intensive outpatient (IOP) admission at 14% of the total sample, as shown in Table 9. Most of the sample reported that they were White (65.3%), but 30.7% of the sample chose the option of preferring not to answer a question about their ethnicity (see Table 10).

Table 6

Drug of Choice

	Frequency	Percent
Opiates	62	41.3%
Amphetamines	20	13.3%
Alcohol	57	38.0%
Cocaine	6	4.0%
Benzodiazepines	4	2.7%
Hallucinogens	1	0.7%

Table 7

Route of Administration for Drug of Choice

	Frequency	Percent
Oral	73	48.7%
Snorting/Insufflation	8	5.3%
Smoking/Inhalation	29	19.3%
Intravenously	40	26.7%

Table 8

Previous Treatment Episodes

	Frequency	Percent
1-2 treatment episodes	40	38.1%
3-4 treatment episodes	35	33.3%
5-6 treatment episodes	20	19.0%
Greater than 6 treatment episodes	10	9.5%

Table 9

Treatment Levels of Care (LOC)

	Frequency	Percent
RTC	100	66.7%
PHP	29	19.3%
IOP	21	14.0%

Table 10

Race/Ethnicity

	Frequency	Percent
Caucasian/White	98	65.3%
African American/Black	3	2.0%
Asian/Pacific Islander	2	1.3%
Hispanic/Latino	1	0.7%
Prefer not to answer	46	30.0%

Descriptive Statistics for Independent Variables

During the initial data analysis, I completed descriptive statistics on the independent variables which were meaning, and purpose as measured by the Brief Personal Meaning Profile (PMP-B; Wong, 1998, 2012), and CODs severity of anxiety, as measured by the Burns Anxiety Inventory (BAI; Burns, 1999), and severity of depression, as measured by the Beck Depression Inventory II (BDI-II; Beck et al., 1996).

Meaning. The independent variable, meaning and purpose were measured with the PMP-B (Wong, 1998, 2012). The scores on the PMP-B can range from 21 to 147 points; with a higher score denotes having a greater feeling of meaning in life (Wong, 1998, 2012). The PMP-B scores for the sample in this study had a minimum score of 48 and a maximum score of 147, with a range of 99 (*M* = 94.92, *SD* = 21.294). The skewness of this variable was a .045 (*SE* = .198), while the kurtosis was -.475 (*SE* = .394). This fell within the acceptable range from 2 to -2 (George & Mallery, 2016).

Anxiety. The independent variable of the severity of anxiety was measured with the BAI (Burns, 1999). The scores on the BAI can range from 0 to 99, with a higher score indicating a higher level of symptom severity of anxiety. The BAI for this study's sample had a minimum score of 0 and a maximum score of 99, with a range of 99 (*M* = 32.47, *SD* = 22.736). The skewness of this variable was a .769 (*SE* = .198), while the kurtosis was .047 (*SE* = .394). The skewness and kurtosis fell within the acceptable range from 2 to -2 (George & Mallery, 2016).

Depression. The independent variable of the severity of depression was measured by the BDI-II (Beck et al., 1996). The scores on the BDI-II can range from 0 to 63, a

higher score denoting a higher level of symptom severity of depression (Beck et al., 1996). The BDI-II for this study's sample had a minimum score of 21 and a maximum score of 67, with a range of 46 (M = 39.21, SD = 10.212). The skewness of this variable was a .537 (SE = .198), while the kurtosis was .267 (SE = .394). These fell within the acceptable range from 2 to -2 (George & Mallery, 2016).

Descriptive Statistics for the Dependent Variable

Attitudes about substances. The dependent variable of attitudes about substances was measured by the BSAAS (Chappel et al., 1985). The BSAAS scores can range from 25 to 125 points, created by adding all the individual scores together. The higher the overall score, the stronger attitude an individual has against using substances. This study's sample exhibited BSAAS scores extending from a minimum score of 44 to a maximum score of 98, with a range of 54 (M = 68.25, SD = 10.074). The skewness of this variable was a .098 (SE = .198), while the kurtosis was -.121 (SE = .394). These fell within the acceptable range from 2 to -2 (George & Mallery, 2016).

Chi-square. Following the descriptive statistics, I conducted a Chi-square test to assess for any significant associations between the independent variables. The Chi-square test for the BDI-II revealed that there was a statistically significant difference in the number of people with varying depressive symptoms that were included in this study ($X^2(42) = 89.080, p < .05$). The Chi-square test for the PMP-B revealed that there was no statistically significant difference, ($X^2(69) = 48.800, p > .05$), there was also no statistically significant difference for the BAI, ($X^2(67) = 48.560, p > .05$).

Statistical Analysis and Findings

For this study, I was exploring if the independent variables of meaning and purpose, along with the severity of symptoms of anxiety and depression may predict an individual's attitudes and beliefs about addiction. The research question included the following:

Research Question 1: To what extent does meaning as measured by the Brief Personal Meaning Profile (PMP-B; Wong, 1998, 2012), and CODs severity of anxiety, as measured by the Burns Anxiety Inventory (BAI; Burns, 1999), and severity of depression, as measured by the Beck Depression Inventory II (BDI-II; Beck et al., 1996), relates to an individual's attitudes about addiction as measured by the Brief Substance Abuse Attitude Survey (BSAAS; Chappel et al., 1985)?

Null hypothesis (H_0): There is no statistically significant correlation between a regression model including meaning as measured by the Brief Personal Meaning Profile (PMP-B; Wong, 1998, 2012), and CODs severity of anxiety, as measured by the Burns Anxiety Inventory (BAI; Burns, 1999), and severity of depression, as measured by the Beck Depression Inventory II (BDI-II; Beck et al., 1996), and an individual's attitudes about addiction as measured by the Brief Substance Abuse Attitude Survey (BSAAS; Chappel et al., 1985) among persons receiving treatment for drug and alcohol addiction.

Alternative hypothesis (H_1): There is a statistically significant correlation between a regression model including meaning as measured by the Brief Personal Meaning Profile (PMP-B; Wong, 1998, 2012), and CODs severity of anxiety, as measured by the Burns Anxiety Inventory (BAI; Burns, 1999), and severity of depression, as measured by

the Beck Depression Inventory II (BDI-II; Beck et al., 1996), and an individual's attitudes about addiction as measured by the Brief Substance Abuse Attitude Survey (BSAAS; Chappel et al., 1985) among persons receiving treatment for drug and alcohol addiction.

Correlation. A Pearson's correlation table was tabulated as part of the multiple regression analysis that I conducted for this study. A Pearson's correlation assesses the correlational relationship or connection between variables (Field, 2013). For this study, the variables were meaning and purpose and CODs severity of anxiety and depression on an individual's attitudes about addiction among persons receiving treatment for drug and alcohol addiction.

A negative correlation was found between the BDI-II and the PMPB, ($r = -0.390$, $p < .01$). A positive correlation between the BDI-II and the BAI was found, ($r = 0.629$, $p < .05$). Also, a positive correlation between BAI and BSAAS was found ($r = 0.044$, $p < .01$). See Table 11. The negative correlation between the BDI-II and the PMPB explains that as there is a decrease in one area, there will be a rise in the other area, for example as an individual experience's a decrease in their depressive symptoms they are more than likely going to have an increased sense of personal meaning. The positive correlation between the BDI-II and the BAI shows that as an individual has low depressive symptoms that person is more likely to have low anxiety symptoms as well. The positive correlation between the BAI and the BSAAS shows that as an individual experience's fewer anxiety symptoms their attitude towards substances shifts.

Table 11

Correlation

		DV: BSAAS	IV: PMPB	IV: BDI-II	IV: BAI
Pearson correlation	BSAAS	1	.121	.097	.140
	PMPB	.121	1	-.390	-.108
	BDI-II	.097	-.390	1	.629
	BAI	.140	-.108	.629	1
Sig. (1-tailed)	BSAAS		.070	.118	.044*
	PMPB	.070		.000**	.093
	BDI-II	.118	.000**		.000**
	BAI	.044*	.093	.000**	

Note. * $p < .05$, ** $p < .01$; DV, dependent variable; IV, independent variables

Multiple Regression Analysis

The main assumptions for a multiple regression are the independence of linearity, normality, multicollinearity, and homoscedasticity (Field, 2013). Linearity was evaluated with a normal P-Plot, and a normal linear distribution was found amongst the data (Field, 2013). I used a scatterplot of the residuals to assess for homoscedasticity, as there was no distinct pattern amongst the points as well as an appearance of a normal distribution on both axis's (Field, 2013). I assessed for multicollinearity utilizing the VIF values ensuring all values were below 10. I also conducted *t*-tests (assuming equal variances) and analysis of variance (ANOVA) to ensure normality (Kim, 2013). There was the independence of residuals, as assessed by a Durbin-Watson statistic of 1.901.

I conducted a multiple linear regression on an individual's attitudes about addiction while receiving treatment for drug and alcohol addiction, based on the individuals meaning and CODs severity of anxiety and depression as they relate to an

individual's attitudes about addiction among persons receiving treatment for drug and alcohol addiction. I evaluated the regression for any unusual points including assessing for outliers, leverage points, and influential points; no unusual points were found within the data.

The multiple regression analysis did not yield any statistical significance ($p >$ .05). Showing that meaning and CODs severity of anxiety and depression do not significantly predict an individual's attitudes about addiction among persons receiving treatment for drug and alcohol addiction, $F(3,146) = 2.244$, $p > .05$ with an $R^2 = .051$ and an adjusted $R^2 = .031$. As a result of the statistically significant findings, I will accept the null hypothesis (H_1) which is there is no statistically significant correlation between a regression model including meaning and CODs severity of anxiety and depression and an individual's attitudes about addiction among persons receiving treatment for drug and alcohol addiction.

Summary

I discussed data analysis and the results of the study. After receiving IRB approval, I received and cleaned the data, ensuring that the data being used was not missing any responses and was chosen at random by selecting every third patient record. I discussed the demographics and descriptive of the data. I found interesting findings results, as the sample contained more males than females, there was a split between opiates and alcohol as the main drug of choice for the sample population, with a large portion being in the residential program.

I conducted a Pearson's correlation to assess the correlational relationship between variables. A statistically significant negative correlation was found between the BDI-II and the PMPB. Whereas, a statistically positive correlation was found to exist between the BDI-II and the BAI, as well as the BAI and BSAAS. A multiple regression analysis was conducted and showed that there was not a statistically significant relationship between an individual's attitudes and beliefs about addiction as predicted by that individual's meaning and CODs symptoms of anxiety and depression. In chapter 5, I discuss the findings from the analysis and the impact of accepting the null hypothesis as well as the future implications found from accepting the null hypothesis.

Chapter 5: Discussion, Conclusion, and Recommendations

Introduction

The purpose of this archival quantitative study was to examine the relationship between an individual's personal sense of meaning and symptoms of co-occurring diagnoses (CODs) of depression and anxiety during substance use disorder (SUD) treatment, while also exploring whether a personal sense of meaning has a relationship with the individual's attitudes toward substances. There was a need to understand the extent to which an individual's personal sense of meaning and CODs symptoms of anxiety and depression relate to an individual's attitudes about addiction. A large risk factor for those affected by a SUD is having a co-occurring mental health issue (Horton et al., 2016). As previously discussed in this current study, counselor educators are unable to equip fully and train counselors that are entering the field of addiction because they fail to understand the dynamic interplay of CODs, individuals' sense of meaning and purpose, and their attitudes about their addictions.

I conducted a multiple regression analysis to test the hypothesis. As discussed in Chapter 4, the key findings from this study were the acceptance of the null hypothesis, meaning that there was no significant relationship between meaning and CODs severity of anxiety and depression and an individual's attitudes about addiction among persons receiving treatment for drug and alcohol addiction. During the analysis, some correlations were found to indicate significant connections between some of the variables but not all of the variables. Since the research question for this study was how does

meaning and CODs severity of anxiety and depression relate to an individual's attitudes about addiction, the overall hypothesis was not found to be significant.

A Pearson correlation indicated a statistically significant negative correlation between the BDI-II and the PMP-B. Also, a statistically significant correlation was found between the BDI-II and the BAI, as well as between the BSAAS and the BAI. This chapter includes a discussion of the results of the study presented in Chapter 4, implications of the results and recommendations for counselors and counselor educators as well as students, implications for social change, limitations of the research, and recommendations for future research.

Interpretation of Findings

The purpose of this study was to examine the extent to which meaning and CODs of anxiety and depression predict an individual's attitudes and beliefs about addiction. Data were obtained through archival patient records and were analyzed using multiple regression. The multiple regression analysis indicated no statistically significant relationship between an individual's attitudes and beliefs about addiction as predicted by that individual's sense of personal meaning and CODs symptoms of anxiety and depression.

A Pearson correlation indicated a significant connection between meaning and CODs severity of anxiety and depression on an individual's attitudes about addiction among persons receiving treatment for drug and alcohol addiction. A statistically significant negative correlation existed between the BDI-II and the PMP-B, and a statistically significant positive correlation existed between the BDI-II and the BAI.

There was also a statistically significant positive correlation between the BSAAS and the BAI. The correlation between the BDI-II and the PMP-B showed that as an individual experiences low depression symptoms, he or she is more likely to have an increased sense of personal meaning. The correlation between the BDI-II and the BAI showed that an individual with low depressive symptoms is more likely also to have low anxiety symptoms. The correlation between the BAI and the BSAAS indicated that individuals with lower anxiety symptoms exhibit an attitude shift toward substances.

The will to meaning is the central motivation for humans because humans can sacrifice pleasure and endure pain for a meaningful cause (Ameli & Dattilio, 2013; Frankl, 2006). Individuals struggling with SUDs find themselves in the existential vacuum, which causes increased pain and continued hopelessness, meaninglessness, and lack of purpose in life (Frankl, 2006, 2014; Ortíz & Flórez, 2016). The absence of a relationship between meaning and CODs symptoms of depression and anxiety in relation to an individual's attitudes about addiction makes it difficult to understand the factors involved in the existential vacuum created by SUDs.

Logotherapy focuses on the ability to seek meaning regardless of the situation, through further seeking, understanding, and development of values and beliefs (Smith, 2013). At the foundation of logotherapy is the belief that meaning can empower individuals to gain awareness and overcome any difficulty in life (Frankl, 2006). Previous researchers indicated correlations between the presence of meaning in life, the search for meaning in life, life satisfaction, happiness, positive and negative affect, and

depression (Park et al., 2010; Steger et al., 2011). Haugan (2013) found negative correlations between meaning in life and symptoms of depression and anxiety.

Although the regression analysis in the current study did not show any significant relationships, the correlations indicated significant connections between depression, anxiety, and meaning. These findings are similar to previous findings regarding characteristics of low resilience in patients diagnosed with depression and anxiety; the PMP-B scores were low for individuals with increased depressive and anxiety symptoms, supporting the notion that meaning can serve as a resilient factor for those struggling with these CODs (Min et al., 2013). Kleftaras and Katsogianni (2012) found significant negative correlations between depressive symptoms and meaning in life, which is supported by the negative correlation found in the current study between the BDI-II and the PMP-B. The negative correlation found between the BDI-II and the PMP-B indicated that as an individual reports lower depressive symptoms, he or she is more likely to have an increased sense of personal meaning.

A direct correlation has been shown to exist between substance use, increased depressive symptoms, and lower self-efficacy, which increases the likelihood that continued substance use will occur (Sugarman et al., 2013). The findings from the current study showed a negative correlation between depressive symptoms and personal meaning, indicating that with increased depressive symptoms an individual exhibits a lower sense of personal meaning that equates to lower self-efficacy. Self-efficacy plays a significant role in substance abuse and comorbidities, and researchers have shown that when dealing with SUDs and CODs, self-efficacy is significantly diminished (Deane et

al., 2012; McKay et al., 2013; Sugarman et al., 2013). Self-efficacy is directly related to an individual's belief that he or she can address or overcome a challenge that exists. To attain recovery from SUDs and CODs, individuals need to believe that they can overcome their addiction and mental health symptoms, which taps directly into their self-efficacy (Grella & Stein, 2013; McKay et al., 2013; Sugarman et al., 2013). Previous research indicated a direct correlation between lower self-efficacy and increased depressive symptoms, increasing the likelihood that continued substance use would occur (Sugarman et al., 2013). Although the correlational findings from this study contributed to the understanding of the role of self-efficacy, further research is needed to develop a better understanding.

The results from the PMP-B subscales showed that only achievement and fair treatment had strong scores; the remaining subscales (relationship, religion, self-transcendence, self-acceptance, intimacy) had relatively low scores when compared to the BDI-II and the BAI. These findings indicated that with increased depressive and anxiety symptoms, an individual is more likely to have decreased self-efficacy/self-acceptance, lower resilience, increased hopelessness, increased rumination, and increased worry in daily life, which are factors that increase an individual's potential to relapse (Deane et al., 2012; Kleftaras & Katsogianni, 2012; McKay et al., 2013; Min et al., 2013; Ortíz & Flórez, 2016; Park et al., 2010; Steger et al., 2011; Sugarman et al., 2013). Researchers have shown that established SUDs and CODs can mutually reinforce and maintain each other, which can negatively impact treatment and support the need for highly trained clinicians and treatment approaches (Ruglass et al., 2014).

The results for BDI-II and the BAI showed that the sample had severe depressive symptoms and severe anxiety symptoms, which addressed the complex relationship between SUD and CODs and the intermingled nature of both disorders. The current study's findings supported previous research that showed that individuals struggling with substance abuse and comorbidities also report having a low sense of meaning and purpose in their lives (Martin et al., 2011). The greater the depressive symptoms in adults with alcohol dependence, the greater the depth in their existential vacuum, which in turn creates a largely negative attitude towards life (Kleftaras & Katsogianni, 2012). The current findings suggested that this is more likely true for those struggling with opioid dependence as well. In alignment with previous research, data in the current study revealed that individuals dealing with addiction and comorbidities are usually dealing with a long-term (1 year or more) catastrophe and thus have lost or negated most of their self-efficacy (Deane et al., 2012; Grella & Stein, 2013; McKay et al., 2013; Sugarman et al., 2013).

Limitations of the Study

Some of the limitations of this cross-sectional study involve generalizability, reliability, and validity. Using an archival study design can create a limitation because of the risk of data being unreliable or collected with poor standards (Rudestam & Newton, 2015). The sample size was chosen from one specific dual-diagnosis treatment center located in the western part of the United States based upon patients admitting into the treatment program, which could have created limitations with generalizability. Reliability was addressed by double checking all work, recoding data, filtering data, and

performing statistical calculations; however, there was still a chance for human error. I used archival data, which could have created limitations because of my lack of involvement in the data collection, as well as the data being collected for other purposes other than to address a particular research question (see Cheng & Phillips, 2014). The current study included self-reported data, which could have created limitations because of the risk of nonresponse bias and study participants responses differing from the general population (Selkie et al., 2015).

Recommendations

Based upon the findings of this study, several recommendations can be made for future studies to address meaning and CODs severity of anxiety and depression as they relate to an individual's attitudes about addiction among persons receiving treatment for drug and alcohol addiction. Future studies are recommended to assess the role of confounding variables that were not addressed in the current study. Future studies are also recommended to address a different population to determine whether the general population struggles with the same high levels of depressive and anxiety symptoms in correlation with loss of personal meaning.

Another recommendation is to assess an individual's personal meaning as it relates to his or her view on substances. It is possible that there was no relationship found between meaning and attitudes about substances because during active substance use, an individual has aligned his or her personal meaning with the substance being abused. Meaning is defined as the things that an individual believes in, places value on, and is committed to (Awasthi et al., 2014; George & Park, 2014; Heintzelman & King,

2014; Steger, 2012). This study's findings indicated that during active addiction individuals might be assigning increased levels of personal meaning to the substance they are addicted to because the substance they are dependent upon is more than likely held in high regard, deeply valued, and has a formed commitment with due to the nature of the disease of addiction. Another recommendation for future research is to do a longitudinal study to improve understanding of the independent variables discussed in this study as an individual progressed in treatment and recovery. Future studies should address the connection between logotherapy or existentialism and SUD and CODs recovery.

Implications

Positive Social Change

SUD and CODs are challenging areas to research because of the unique dynamics of both disorders. According to Frankl (2006), if meaninglessness is a result of addiction, then addiction treatment should provide the opportunity for restoration of meaning. Frankl (2014) pointed out that for addictions logotherapy addresses the existential vacuum or the absence of philosophy in life resulting from the inability of previous traditions and values to provide current guidance. Although findings from the current study did not indicate statistically significant relationships between meaning, CODs symptoms of depression and anxiety in relation to attitudes about substances for individuals undergoing substance treatment, the ability to find meaning in life creates an opportunity to replace despair with hope (Singer et al., 2013).

Recommendations for Action

The results of this study may assist counselor educators in furthering student understanding of the complexity of SUD and CODs, due to the lack of finding a statistically significant relationship between variables. The findings from this study may further assist counselor educators in understanding the correlation between SUD, increased depressive symptoms, and low personal meaning. The results reinforced previous findings regarding the correlation between depression and anxiety. The correlation between depressive and anxiety symptoms may also assist counselor educators in understanding the connection between the severity of symptoms with the knowledge of the disorders.

Because of the cost of substance abuse in the United States exceeds $410 billion per year according to National Institute on Drug Abuse (2015), providing any assistance to decrease this cost and decrease the societal impact while lessening the personal impact would be an improvement. When designing this study, I had anticipated counselor educators would gain awareness of the importance of addressing a client’s sense of meaning in life during substance use treatment because of the relationship with COD symptoms of depression and anxiety. Although the results were not as expected, there was still important information learned. This study’s findings supported the established connection between SUDs and CODs mutually reinforcing and maintaining each other, which can negatively impact treatment and life, and which strongly supports the need for highly trained clinicians and treatment approaches (Ruglass et al., 2014). It is crucial that

counselor educators understand the changing treatment landscape for SUDs and CODs because of the impact they have on the future generation of counselors.

Logotherapy centers on an individual's ability to discover, interact, and choice to overcome one's problems while focusing on the assets and strengths the individuals have and their future possibilities and potentials (Ameli, 2016). Since it is the power of choice, which distinguishes humans from other animals, it is important to understand that this great power of choice can be unpredictable due to the linking of intentionality behind every specific choice that is made (Ameli, 2016). Thus, individuals struggling with SUDs and CODs may sense their power of choice is limited due to the effect the substance and symptoms have on their life. Creating a cycle that is distinguished by continued substance use and significant symptoms leading to a life lacking meaning and purpose that keeps one connected to a belief they can never overcome either their addiction or mental health symptoms. Logotherapy is designed to increase purpose in life by highlighting choices, responsibility, and living a life that is consistent with an individual's personal meaning and values (Martin et al., 2011); focusing on "what is left rather than what is lost" (Yehuda et al., 2016; para. 16). Counselor educators can impart this information to the future generation of counselors, empowering both the students they educate and the clients that the future generation of counselors will eventually assist.

Conclusion

In conclusion, this study provides further information in understanding SUDs and CODs. The expansive cost associated with SUDs and CODs; the cost of which impacts and effect upon all areas of life including personal, financial, and societal. It is critical to

continue to gain further understanding of the dynamics involved with SUD and CODs is crucial. Due to the impact that counselor educators have on future generations increasing the educator's knowledge and understanding is crucial for change to occur. Studies have shown that for individuals struggling with SUDs life satisfaction, self-efficacy, and an ability to have an attitudinal shift regarding overcoming suffering or obstacles is significantly diminished (Grella & Stein, 2013; McKay et al., 2013; Sugarman et al., 2013). In focusing more on the attitudinal shift that needs to occur for individuals instead of focusing on the current or continued symptoms, the individual can experience a genuine shift in their life perspective (Ameli, 2016; Frankl, 2006). The shift comes from a lessening of COD symptoms, where depression was shown to have a negative correlation with personal meaning, while depressive and anxiety symptoms were found to have a strong positive correlation.

Logotherapy is designed to help individuals find meaning in a seemingly meaningless situation (Frankl, 2006). Logotherapy focuses on the ability to seek meaning regardless of the situation; through further seeking, understanding, and development of one's values and beliefs (Smith, 2013). Through focusing on increasing purpose in life through highlighting choices and responsibility, logotherapy assists individual with living a life that is consistent with an individual's personal meaning and values (Martin et al., 2011). By increasing our understanding of SUDs and CODs, we are making an investment in society and the world in which we live, thus creating a better world for tomorrow.

References

Aamodt, M. (2015). *Industrial/organizational psychology: An applied approach*. Boston, MA: Cengage Learning.

Allan, B. A., Duffy, R. D., & Douglass, R. (2015). Meaning in life and work: A developmental perspective. *Journal of Positive Psychology*, *10*(4), 323-331. doi:10.1080/17439760.2014.950180

Alvaro, P. K., Roberts, R. M., & Harris, J. K. (2013). A systematic review assessing bidirectionality between sleep disturbances, anxiety, and depression. *Sleep*, *36*(7), 1059-1068. doi:10.5665/sleep.2810

Ameli, M. (2016). Integrating logotherapy with cognitive behavior therapy: A worthy challenge. In A. Batthyany (Ed.), *Logotherapy and existential analysis: Proceedings of the Viktor Frankl Institute Vienna (*Vol.1, pp. 197-217). Cham, Switzerland: Springer International Publishing. doi:10.1007/978-3-319-29424-7_18

Ameli, M., & Dattilio, F. M. (2013). Enhancing cognitive behavior therapy with logotherapy: Techniques for clinical practice. *Psychotherapy*, *50*(3), 387-391. doi:10.1037/a0033394

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Arlington, VA: American Psychiatric Publishing. doi:10.1176 /appi.books.9780890425596

Armstrong, L. L., & Manion, I. G. (2015). Meaningful youth engagement as a protective factor for youth suicidal ideation. *Journal of Research on Adolescence*, *25*(1), 20-27. doi:10.1111/jora.12098

Awasthi, P., Chauhan, R., & Verma, S. (2014). Meaningfulness in life span perspectives: An overview. *Purushartha: Journal of Management Ethics and Spirituality*, *7*(2), 98-113.

Barbosa, P., Raymond, G., Zlotnick, C., Wilk, J., Toomey, R., III., & Mitchell, J., III. (2013). Mindfulness-based stress reduction training is associated with greater empathy and reduced anxiety for graduate healthcare students. *Education for Health*, *26*(1), 9-14. doi:10.4103/1357-6283.112794

Barral, C., Rodríguez-Cintas, L., Martínez-Luna, N., Bachiller, D., Pérez-Pazos, J., Alvarós, J., ... & Roncero, C. (2016). Reliability of the Beck Depression Inventory in opiate-dependent patients. *Journal of Substance Use*, *21*(2), 128-132. doi:10.3109/14659891.2014.980859

Beck, A. T., Steer, R. A., & Brown, G. K. (1996). *Manual for the Beck Depression Inventory-II*. San Antonio, TX: Psychological Corporation.

Best, D., Savic, M., Beckwith, M., Honor, S., Karpusheff, J., & Lubman, D. I. (2013). The role of abstinence and activity in the quality of life of drug users engaged in treatment. *Journal of Substance Abuse Treatment*, *45*(3), 273-279. doi:10.1016/j.jsat.2013.02.010

Bickel, W. K., Johnson, M. W., Koffarnus, M. N., MacKillop, J., & Murphy, J. G. (2014). The behavioral economics of substance use disorders: Reinforcement pathologies and their repair. *Annual Review of Clinical Psychology*, *10*, 641-677. doi:10.1146/annurev-clinpsy-032813-153724

Brassai, L., Piko, B. F., & Steger, M. F. (2012). Existential attitudes and Eastern European adolescents' problem and health behaviors: Highlighting the role of the search for meaning in life. *Psychological Record*, *62*(4), 719-734. doi:10.1007/bf03395831

Brière, F. N., Rohde, P., Seeley, J. R., Klein, D., & Lewinsohn, P. M. (2014). Comorbidity between major depression and alcohol use disorder from adolescence to adulthood. *Comprehensive Psychiatry*, *55*(3), 526-533. doi:10.1016/j.comppsych.2013.10.007

Bryman, A. (2015). *Social research methods*. Oxford, England: Oxford University Press.

Buchner, A., Faul, F., & Erdfelder, E. (n.d.). G*Power. Retrieved from http://www.psycho.uni-duesseldorf.de/abteilungen/aap/ gpower3/download-andregister/Dokumente/GPower3-BRM-Paper.pdf

Budge, S. L., Rossman, H. K., & Howard, K. A. (2014). Coping and psychological distress among genderqueer individuals: The moderating effect of social support. *Journal of LGBT Issues in Counseling*, *8*(1), 95-117. doi:10.1080/15538605.20 14.853641

Burkholder, G. (2012). *Sample size analysis for quantitative studies*. Retrieved from https://waldenu.edu/Sample_Size_Analysis.pdf

Burns, D. D. (1999). *The Burns Depression Checklist (BDC) and the Burns Anxiety Inventory (BAI). In The feeling good handbook* (Revised edition). New York, NY: Plume.

Burns, D. D. (1989). Burns Anxiety Inventory. PsycTESTS Dataset. doi:10.1037/t20069-000

Burns, D. D., & Eidelson, R. J. (1998). Why are depression and anxiety correlated? A test of the tripartite model. *Journal of Consulting and Clinical Psychology*, *66*(3), 461-473. doi:10.1037/0022-006X.66.3.461

Campbell, D. T., & Stanley, J. C. (1963). *Experimental and quasi-experimental designs for research*. Boston, MA: Houghton Mifflin.

Chappel, J. N., Veach, T. L., & Krug, R. S. (1985). The substance abuse attitude survey: An instrument for measuring attitudes. *Journal of Studies on Alcohol and Drugs*, *46*(1), 48-52. doi:10.15288/jsa.1985.46.48

Cheng, H. G., & Phillips, M. R. (2014). Secondary analysis of existing data: opportunities and implementation. *Shanghai Archives of Psychiatry*, *26*(6), 371-375. doi:10.11919/j.issn.1002-0829.214171

Cohen, K., & Cairns, D. (2011). Is searching for meaning in life associated with reduced subjective well-being? Confirmation and possible moderators. *Journal of Happiness Studies*, *13*(2), 313-331. doi:10.1007/s10902-011-9265-7

Confidentiality of Substance Use Disorder Patient Records, 42 CFR, Part 2 (March 21, 2017).

Coorevits, P., Sundgren, M., Klein, G., Bahr, A., Claerhout, B., Daniel, C., … & Kalra, D. (2013) Electronic health records: New opportunities for clinical research. *Journal of Internal Medicine, 274*(6), 547-60. doi:10.1111/joim.12119

Corner, T. L. (2003). *Personal meaning and youth substance use* (Unpublished doctoral dissertation). Macquarie University, Sydney, Australia.

Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches* (3rd ed.). Thousand Oaks, CA: Sage Publications.

Crum, R. M., La Flair, L., Storr, C. L., Green, K. M., Stuart, E. A., Alvanzo, A. A., ... & Mojtabai, R. (2012). Reports of drinking to self-medicate anxiety symptoms: Longitudinal assessment for subgroups of individuals with alcohol dependence. *Depression and Anxiety*, *30*(2), 174-183. doi:10.1002/da.22024

Datu, J. A. D., & Mateo, N. J. (2015). Gratitude and life satisfaction among Filipino adolescents: The mediating role of meaning in life. *International Journal for the Advancement of Counselling*, *37*(2), 198-206. doi:10.1007/s10447-015-9238-3

Daum, T. L., & Wiebe, G. (2003). *Locus of control, personal meaning, and self-concept before and after an academic critical incident* (Unpublished master's thesis). Trinity Western University, Langley, BC, Canada.

Deane, F. P., Wootton, D. J., Hsu, C. I., & Kelly, P. J. (2012). Predicting dropout in the first 3 months of 12-step residential drug and alcohol treatment in an Australian sample. *Journal of Studies on Alcohol and Drugs*, *73*(2), 216-225. doi:10.15288/jsad.2012.73.216

Dere, J., Watters, C. A., Yu, S. C. M., Bagby, R. M., Ryder, A. G., & Harkness, K. L. (2015). Cross-cultural examination of measurement invariance of the Beck Depression Inventory–II. *Psychological Assessment*, *27*(1), 68-81. doi:10.1037/pas0000026

Dezutter, J., Casalin, S., Wachholtz, A., Luyckx, K., Hekking, J., & Vandewiele, W. (2013). Meaning in life: An important factor for the psychological well-being of chronically ill patients? *Rehabilitation psychology*, *58*(4), 334-341. doi:10.1037/a0034494

Diaz, N., Horton, E. G., & Malloy, T. (2014). Attachment style, spirituality, and depressive symptoms among individuals in substance abuse treatment. *Journal of Social Service Research*, *40*(3), 313-324. doi:10.1080/01488376.2014.896851

Drescher, C. F., Baczwaski, B. J., Walters, A. B., Aiena, B. J., Schulenberg, S. E., & Johnson, L. R. (2012). Coping with an ecological disaster: The role of perceived meaning in life and self-efficacy following the Gulf oil spill. *Ecopsychology*, *4*(1), 56-63. doi:10.1089/eco.2012.0009

Eaton, N. R., Rodriguez-Seijas, C., Carragher, N., & Krueger, R. F. (2015). Transdiagnostic factors of psychopathology and substance use disorders: A review. *Social Psychiatry and Psychiatric Epidemiology*, *50*(2), 171-182. doi:10.1007/s00127-014-1001-2

Fallon, V., Halford, J. C. G., Bennett, K. M., & Harrold, J. A. (2016). The Postpartum Specific Anxiety Scale: development and preliminary validation. *Archives of Women's Mental Health*, *19*(6), 1079-1090. doi:10.1007/s00737-016-0658-9

Field, A. (2013). *Discovering statistics using IBM SPSS Statistics* (4th ed.). London, UK: Sage.

Fowler, F. J. (2013). *Survey research methods*. Thousand Oaks, CA: Sage.

Frankfort-Nachmias, C., Nachmias, D., & DeWaard, J. (2015). *Research methods in the social sciences* (8th ed.). New York, NY: Worth.

Frankl, V. E. (2006). *Man's search for meaning*. Boston, MA: Beacon Press.

Frankl, V. E. (2014). *The will to meaning: Foundations and applications of logotherapy*. New York, NY: Penguin.

Frankl, V. E. (1970). *The will to meaning: Foundations and applications of logotherapy*. New York, NY: Penguin.

Galek, K., Flannelly, K. J., Ellison, C. G., Silton, N. R., & Jankowski, K. R. (2015). Religion, meaning and purpose, and mental health. *Psychology of Religion and Spirituality*, *7*(1), 1-12. doi:10.1037/a0037887

Gallant, C. M. (2001). *Existential expeditions: Religious orientations and personal meaning* (Unpublished master's thesis). Trinity Western University, Langley, BC, Canada.

Gamble, S. A., Talbot, N. L., Cashman-Brown, S. M., He, H., Poleshuck, E. L., Connors, G. J., & Conner, K. R. (2013). A pilot study of interpersonal psychotherapy for alcohol-dependent women with co-occurring major depression. *Substance Abuse*, *34*(3), 233-241. doi:10.1080/08897077.2012.746950

García-Alandete, J. (2015). Does meaning in life predict psychological well-being? *The European Journal of Counselling Psychology, 3*(2), 89-98. doi:10.5964/ejcop.v3i2.27

Garson, G. D. (2015). *Missing values analysis and data imputation*. Asheboro, NC: Statistical Associates.

George, D., & Mallery, P. (2016). *IBM SPSS statistics 23 step by step: A simple guide and reference*. New York, NY: Routledge.

George, L. S., & Park, C. L. (2014). Existential mattering: Bringing attention to a neglected but central aspect of meaning? In A. Batthyany & P. Russo-Netzer (Eds.), Meaning in Positive and Existential Psychology (pp. 39–51). New York, NY: Springer. doi:10.1007/978-1-4939-0308-5_3

Gillies, J., Neimeyer, R. A., & Milman, E. (2014). The meaning of loss codebook: Construction of a system for analyzing meanings made in bereavement. *Death Studies*, *38*(4), 207-216. doi:10.1080/07481187.2013.829367

Goodwin, R. D., & Stein, D. J. (2013). Anxiety disorders and drug dependence: Evidence on sequence and specificity among adults. *Psychiatry and Clinical Neurosciences*, *67*(3), 167-173. doi:10.1111/pcn.12030

Grant, B. F., Goldstein, R. B., Saha, T. D., Chou, S. P., Jung, J., Zhang, H., ... & Hasin, D. S. (2015). Epidemiology of DSM-5 alcohol use disorder: Results from the National Epidemiologic Survey on Alcohol and Related Conditions III. *JAMA Psychiatry*, *72*(8), 757-766. doi:10.1001/jamapsychiatry.2015.0584

Grella, C. E., & Stein, J. A. (2013). Remission from substance dependence: differences between individuals in a general population longitudinal survey who do and do not seek help. *Drug and Alcohol Dependence*, *133*(1), 146-153. doi:10.1016/j. drugalcdep.2013.05.019

Grella, C. E., Karno, M. P., Warda, U. S., Niv, N., & Moore, A. A. (2009). Gender and comorbidity among individuals with opioid use disorders in the NESARC study. *Addictive Behaviors*, *34*(6), 498-504. doi:10.1016/j.addbeh.2009.01.002

Grouden, M. E., & Jose, P. E. (2015). Do sources of meaning differentially predict search for meaning, presence of meaning, and wellbeing? *International Journal of Wellbeing, 5*(1), 33-52. doi:10.5502/ijw.v5i1.3

Han, B., Compton, W. M., Blanco, C., & Colpe, L. J. (2017). Prevalence, treatment, and unmet treatment needs of US adults with mental health and substance use disorders. *Health Affairs, 36*(10), 1739-1747. doi:10.1377/hlthaff.2017.0584

Han, B., Hedden, S. L., Lipari, R., Copello, E. A. P., & Kroutil, L. A. (2015). *Receipt of services for behavioral health problems: Results from the 2014 national survey on drug use and health*. Rockville, MD: Substance Abuse and Mental Health Services Administration.

Harris, M., Fallot, R. D., & Berley, R. W. (2014). Special section on relapse prevention: Qualitative interviews on substance abuse relapse and prevention among female trauma survivors. *Psychiatric Services*, 56(10), 1292-1296. doi:10.1176/appi.ps.56.10.1292

Hasin, D. S., & Grant, B. F. (2015). The National Epidemiologic Survey on Alcohol and Related Conditions (NESARC) Waves 1 and 2: Review and summary of findings. *Social Psychiatry and Psychiatric Epidemiology*, *50*(11), 1609-1640. doi:10.1007/s00127-015-1088-0

Haugan, G. (2013). Meaning-in-life in nursing-home patients: A correlate with physical and emotional symptoms. *Journal of Clinical Nursing*, *23*(7-8), 1030-1043. doi:10.1111/jocn.12282

Heintzelman, S. J., & King, L. A. (2014). (The feeling of) meaning-as-information. *Personality and Social Psychology Review*, *18*, 153-167. doi:10.1177/1088868313518487

Heintzelman, S. J., Trent, J., & King, L. A. (2013). Encounters with objective coherence and the experience of meaning in life. *Psychological Science*, *24*(6), 991-998. doi:10.1177/0956797612465878

Holliday, S. B., Pedersen, E. R., & Leventhal, A. M. (2016). Depression, posttraumatic stress, and alcohol misuse in young adult veterans: The transdiagnostic role of distress tolerance. *Drug & Alcohol Dependence*, *161*, 348-355. doi:10.1016/j. drugalcdep.2016.02.030

Horton, E. G., Diaz, N., Weiner, M., & Malloy, T. (2012). Adult attachment style, spirituality, and religiosity among individuals in treatment for substance use disorders. *Florida Public Health Review*, *9*, 121-131.

Horton, G., Luna, N., & Malloy, T. (2016). Exploring relationships between adult attachment, spirituality and personality disorder traits among individuals in in-patient treatment for substance use disorders. *International Journal of Social Work*, *3*(1), 16-41. doi:10.5296/ijsw.v3i1.8384

Houck, J. M., Forcehimes, A. A., Gutierrez, E. T., & Bogenschutz, M. P. (2013). Test-retest reliability of self-report measures in a dually diagnosed sample. *Substance Use & Misuse*, *48*(1-2), 99-105. doi:10.3109/10826084.2012.731674

Huebner, M., Vach, W., & le Cessie, S. (2016). A systematic approach to initial data analysis is good research practice. *The Journal of Thoracic and Cardiovascular Surgery*, *151*(1), 25-27. doi:10.1016/j.jtcvs.2015.09.085

Jaarsma, T. A., Pool, G., Ranchor, A. V., & Sanderman, R. (2007). The concept and measurement of meaning in life in Dutch cancer patients. *Psycho Oncology: Journal of the Psychological, Social and Behavioral Dimensions of Cancer,* *16*(3), 241-248. doi:10.1002/pon.1056

Jakubczyk, A., Ilgen, M. A., Kopera, M., Krasowska, A., Klimkiewicz, A., Bohnert, A., ... & Wojnar, M. (2016). Reductions in physical pain predict lower risk of relapse following alcohol treatment. *Drug and Alcohol Dependence*, *158*, 167-171. doi:10.1016/j.drugalcdep.2015.11.020

Jensen, D., Cohen, J. N., Mennin, D. S., Fresco, D. M., & Heimberg, R. G. (2016). Clarifying the unique associations among intolerance of uncertainty, anxiety, and depression. *Cognitive Behaviour Therapy*, *45*(6), 431-444. doi:10.1080/16 506073.2016.1197308

Joshi, C., Marszalek, J. M., Berkel, L. A., & Hinshaw, A. B. (2013). An empirical investigation of Viktor Frankl's logotherapeutic model. *Journal of Humanistic Psychology*, *54*(2), 227-253. doi:10.1177/0022167813504036

Katsogianni, I. V., & Kleftaras, G. (2015). The spirituality, meaning in life, and depressive symptomatology in drug addiction. *International Journal of Religion & Spirituality in Society*, *5*(2), 11-24. doi:10.18848/2154-8633/cgp/v05i02/51104

Kelly, T. M., Daley, D. C., & Douaihy, A. B. (2012). Treatment of substance abusing patients with comorbid psychiatric disorders. *Addictive Behaviors*, *37*(1), 11-24. doi:10.1016/j.addbeh.2011.09.010

Kernes, J. L., & Kinnier, R. T. (2008). Meaning in psychologists' personal and professional lives. *Journal of Humanistic Psychology, 48*(2), 196–220. doi:10.1177/0022167807300204

Keyes, K. M., Martins, S. S., Hatzenbuehler, M. L., Blanco, C., Bates, L. M., & Hasin, D. S. (2012). Mental health service utilization for psychiatric disorders among Latinos living in the United States: The role of ethnic subgroup, ethnic identity, and language/social preferences. *Social Psychiatry and Psychiatric Epidemiology*, *47*(3), 383-394. doi:10.1007/s00127-010-0323-y

Khaledian, M., Yarahmadi, M., & Mahmoudfakhe, H. (2016). Effect of group logotherapy in depression and hope in drug addicts. *Journal Research & Health*, *9*(36), 64-80.

Kim, E. S., Strecher, V. J., & Ryff, C. D. (2014). Purpose in life and use of preventive health care services. *Proceedings of the National Academy of Sciences*, *111*(46), 16331-16336. doi:10.1073/pnas.1414826111

Kim, H., & Eaton, N. R. (2015). The hierarchical structure of common mental disorders: Connecting multiple levels of comorbidity, bifactor models, and predictive validity. *Journal of Abnormal Psychology*, *124*(4), 1064-1078. doi:10.1037/ab n0000113

Kim, H. Y. (2013). Statistical notes for clinical researchers: Assessing normal distribution (2) using a and kurtosis. *Restorative Dentistry & Endodontics, 38*(1), 52-54. doi:10.5395/rde.2013.38.1.52

Kircanski, K., Thompson, R. J., Sorenson, J., Sherdell, L., & Gotlib, I. H. (2017). The everyday dynamics of rumination and worry: Precipitant events and affective consequences. *Cognition and Emotion*, 1-13. doi:10.1080/02699931.2017.1 278679

Klaassen, D. W., & McDonald, M. J. (2002). Quest and identity development: Re-examining pathways for existential search. *International Journal for the Psychology of Religion, 12*, 189–200. doi:10.1207/S15327582IJPR1203_05

Kleftaras, G., & Katsogianni, I. (2012). Spirituality, meaning in life, and depressive symptomatology in individuals with alcohol dependence. *Journal of Spirituality in Mental Health*, *14*(4), 268-288. doi:10.1080/19349637.2012.730469

Koball, A. M., Clark, M. M., Collazo-Clavell, M., Kellogg, T., Ames, G., Ebbert, J., & Grothe, K. B. (2016). The relationship among food addiction, negative mood, and eating-disordered behaviors in patients seeking to have bariatric surgery. *Surgery for Obesity and Related Diseases*, *12*(1), 165-170. doi:10.1016/j.soard.2015.04.009

Koivumaa-Honkanen, H., Kaprio, J., Korhonen, T., Honkanen, R. J., Heikkilä, K., & Koskenvuo, M. (2012). Self-reported life satisfaction and alcohol use: A 15-year follow-up of healthy adult twins. *Alcohol and Alcoholism*, *47*(2), 160-168. doi:10.1093/alcalc/agr151

Krentzman, A. R. (2013). Review of the application of positive psychology to substance use, addiction, and recovery research. *Psychology of Addictive Behaviors*, *27*(1), 151-165. doi:10.1037/a0029897

Kunkel, A., Dennis, M. R., & Garner, B. (2014). Illustrating an integrated typology of meaning reconstruction in discourse: Grief-related disclosures. *Death Studies*, *38*(10), 623-636. doi:10.1080/07481187.2013.838810

Laramée, P., Kusel, J., Leonard, S., Aubin, H. J., François, C., & Daeppen, J. B. (2013). The economic burden of alcohol dependence in Europe. *Alcohol and Alcoholism*, *48*(3), 259-269. doi:10.1093/alcalc/agt004

Laudet, A. B., & Humphreys, K. (2013). Promoting recovery in an evolving policy context: What do we know and what do we need to know about recovery support services? *Journal of Substance Abuse Treatment*, *45*(1), 126-133. doi:10.1 016/j.jsat.2013.01.009

Linden, I. A. (2010). The effect of personal use and family history on the attitudes of medical students toward alcohol and drug users. *Journal of Substance Use, 15*(6), 377–389. doi:10.3109/14659890903580458

Lyons, G. C., Deane, F. P., Caputi, P., & Kelly, P. J. (2011). Spirituality and the treatment of substance use disorders: An exploration of forgiveness, resentment and purpose in life. *Addiction Research & Theory*, *19*(5), 459-469. doi:10.3 109/16066359.2011.555022

Machell, K. A., Kashdan, T. B., Short, J. L., & Nezlek, J. B. (2015). Relationships between meaning in life, social and achievement events, and positive and negative affect in daily life. *Journal of Personality*, *83*(3), 287-298. doi:10.1111/jopy.12 103

MacKinnon, C. J., Smith, N. G., Henry, M., Milman, E., Berish, M., Farrace, A., ... & Cohen, S. R. (2016). A pilot study of meaning-based group counseling for bereavement. *OMEGA-Journal of Death and Dying*, *72*(3), 210-233. doi:10.1177 /0030222815575002

MacKinnon, C. J., Milman, E., Smith, N. G., Henry, M., Berish, M., Copeland, L. S., … & Cohen, S. R. (2013). Means to meaning in cancer-related bereavement: Identifying clinical implications for counseling psychologists. *Counseling Psychologist*, *41* (2), 216–239. doi:10.1177/0011000012459969

Martela, F., & Steger, M. F. (2016). The three meanings of meaning in life: Distinguishing coherence, purpose, and significance. *Journal of Positive Psychology*, *11*(5), 531-545. doi:10.1080/17439760.2015.1137623

Martin, W. E., & Bridgmon, K. D. (2012). *Quantitative and statistical research methods: From hypothesis to results*. Somerset, NJ: Wiley & Sons.

Martin, R. A., MacKinnon, S., Johnson, J., & Rohsenow, D. J. (2011). Purpose in life predicts treatment outcome among adult cocaine abusers in treatment. *Journal of Substance Abuse Treatment*, *40*(2), 183-188. doi:10.1016/j.jsat.2010.10.002

Mascaro, N., & Rosen, D. H. (2005). Existential meaning's role in the enhancement of hope and prevention of depressive symptoms. *Journal of Personality*, *73*(4), 985–1014. doi:10.1521/jscp.2008.27.6.576

Mascaro, N., & Rosen, D. H. (2006). The role of existential meaning as a buffer against stress. *Journal of Humanistic Psychology*, *46*(2), 168-190. doi:10.1177/0022 167805283779

Mascaro, N., Rosen, D. H., & Morey, L. C. (2004). The development, construct validity, and clinical utility of the Spiritual Meaning Scale. *Personality and Individual Differences*, *37*(4), 845–860. doi:10.1016/j.paid.2003.12.011

McCambridge, J., Witton, J., & Elbourne, D. R. (2014). Systematic review of the Hawthorne effect: New concepts are needed to study research participation effects. *Journal of Clinical Epidemiology, 67*(3), 267–277. doi:10.1016/j .jclinepi.2013.08.015

McDonald, M. J., Wong, P. T. P., & Gingras, D. T. (2012). Meaning-in-life measures and development of a brief version of the Personal Meaning Profile. In P. T. P. Wong (Ed.), *The human quest for meaning: Theories, research, and applications* (2nd ed., pp. 357-382). New York, NY: Routledge.

McGovern, M. P., Lambert-Harris, C., Gotham, H. J., Claus, R. E., & Xie, H. (2014). Dual diagnosis capability in mental health and addiction treatment services: An assessment of programs across multiple state systems. *Administration and Policy in Mental Health and Mental Health Services Research*, *41*(2), 205-214. doi:10.1007/s10488-012-0449-1

McKay, J. R., Van Horn, D., Rennert, L., Drapkin, M., Ivey, M., & Koppenhaver, J. (2013). Factors in sustained recovery from cocaine dependence. *Journal of Substance Abuse Treatment*, *45*(2), 163-172. doi:10.1016/j.jsat.2013.02.007

Melchior, M., Prokofyeva, E., Younès, N., Surkan, P. J., & Martins, S. S. (2014). Treatment for illegal drug use disorders: The role of comorbid mood and anxiety disorders. *BMC psychiatry*, *14*(1), 89-98. doi:10.1186/1471-244X-14-89

Min, J. A., Jung, Y. E., Kim, D. J., Yim, H. W., Kim, J. J., Kim, T. S., ... & Chae, J. H. (2013). Characteristics associated with low resilience in patients with depression and/or anxiety disorders. *Quality of Life Research*, *22*(2), 231-241. doi:10.1007/s11136-012-0153-3

Miller, A. D., & Rottinghaus, P. J. (2014). Career indecision, meaning in life, and anxiety: An existential framework. *Journal of Career Assessment*, *22*(2), 233-247. doi:10.1177/1069072713493763

Morisano, D., Babor, T. F., & Robaina, K. A. (2014). Co-occurrence of substance use disorders with other psychiatric disorders: Implications for treatment services. *Nordic Studies on Alcohol and Drugs*, *31*(1), 5-25. doi:10.2478/nsad-2014-0002

Morley, K. C., Baillie, A., Leung, S., Sannibale, C., Teesson, M., & Haber, P. S. (2016). Is specialized integrated treatment for comorbid anxiety, depression and alcohol dependence better than treatment as usual in a public hospital setting? *Alcohol and Alcoholism, 51*(4), 402-409. doi:10.1093/alcalc/agv/131

Mulvaney-Day, N., DeAngelo, D., Chen, C. N., Cook, B. L., & Alegría, M. (2012). Unmet need for treatment for substance use disorders across race and ethnicity. *Drug and Alcohol Dependence*, *125*, 44-50. doi:10.1016/j.drugalcdep.2012.05.005

National Institute on Drug Abuse. (2015, June 25). Nationwide Trends. Retrieved from https://www.drugabuse.gov/publications/drugfacts/nationwide-trends

National Institute on Drug Abuse. (2017, April 24). Trends & Statistics. Retrieved from https://www.drugabuse.gov/related-topics/trends-statistics

Ortíz, E. M., & Flórez, I. A. (2016). Meaning in Life in the Prevention and Treatment of Substance Use Disorders. In *Clinical Perspectives on Meaning* (pp. 201-222). Cham, Switzerland: Springer International Publishing. doi:10.1007/978-3-319-41397-6_10

Ortuño-Sierra, J., Rodríguez, L., Debbané, M., & Fonseca-Pedrero, E. (2015). Anxiety assessment: Psychometric properties of the Spanish version of the Burns Anxiety Inventory. *Spanish Journal of Psychology*, *18*, 1-8. doi:10.1017/sjp.2015.47

Park, N., Park, M., & Peterson, C. (2010). When is the search for meaning related to life satisfaction? *Applied Psychology: Health and Well-Being*, *2*(1), 1-13. doi:10.11 11/j.1758-0854.2009.01024.x

Patton, M. Q. (2015). Qualitative research & evaluation methods: Integrating theory and practice (4th ed.). Thousand Oaks, CA: SAGE.

Persons, J. B., Roberts, N. A., Zalecki, C. A., & Brechwald, W. A. (2006). Naturalistic outcome of case formulation-driven cognitive-behavior therapy for anxious depressed outpatients. *Behavior Research and Therapy*, *44*(7), 1041-1051. doi:10.1016/j.brat.2005.08.005

Randall, C. L., Thomas, S., & Thevos, A. K. (2001). Concurrent alcoholism and social anxiety disorder: a first step toward developing effective treatments. *Alcoholism: Clinical and Experimental Research, 25*(2), 210-220. doi:10.1111/j.1530-0277.2001.tb02201.x

Razali, A. B., Razali, N. A. B., Dokoushkani, F., & Mehrad, A. (2015). Recidivism and quality of life among former drug addicts: A report based on prior studies. *Journal of Social Sciences*, *3*(4), 44-49. doi:10.4236/jss.2015.34006

Rehm, J., Shield, K. D., Gmel, G., Rehm, M. X., & Frick, U. (2013). Modeling the impact of alcohol dependence on mortality burden and the effect of available treatment interventions in the European Union. *European Neuropsychopharmacology, 23*(2), 89-97. doi:10.1016/j.euroneuro.2012.08.001

Reker, G. T. (2000). Theoretical perspective, dimensions, and measurement of existential meaning. *Exploring existential meaning: Optimizing human development across the life span*, 39-55. Thousand Oaks, CA: Sage.

Robinson, E. A. R., Krentzman, A. R., Webb, J. R., & Brower, K. J. (2011). Six-month changes in spirituality and religiousness in alcoholics predict drinking outcomes at nine months. *Journal of Studies on Alcohol and Drugs*, *72*, 660–668. doi:10.15 288/jsad.2011.72.660

Rodriguez-Seijas, C., Eaton, N. R., Stohl, M., Mauro, P. M., & Hasin, D. S. (2017). Mental disorder comorbidity and treatment utilization. *Comprehensive Psychiatry, 79*, 89-97. doi:10.1016/j.comppsych.2017.02.003

Roepke, A. M., Jayawickreme, E., & Riffle, O. M. (2013). Meaning and health: A systematic review. *Applied Research in Quality of Life*, *9*(4), 1055-1079. doi:10.1007/s11482-013-9288-9

Rollins, A. L., O'Neill, S. J., Davis, K. E., & Devitt, T. S. (2014). Special section on relapse prevention: Substance abuse relapse and factors associated with relapse in an inner-city sample of patients with dual diagnoses. *Psychiatric Services*, *10*, 1274-1281. doi:10.1176/appi.ps.56.10.1274

Roncero, C., Szerman, N., Terán, A., Pino, C., Vázquez, J. M., Velasco, E., ... & Casas, M. (2016). Professionals' perception on the management of patients with dual disorders. *Patient Preference and Adherence, 10*, 1855-1868. doi:10.2147/PPA. S108678

Rudestam, K. E., & Newton, R. R. (2015). *Surviving your dissertation: A comprehensive guide to content and process* (4th ed.). Thousand Oaks, CA: Sage.

Ruglass, L. M., Lopez-Castro, T., Cheref, S., Papini, S., & Hien, D. A. (2014). At the crossroads: The intersection of substance use disorders, anxiety disorders, and posttraumatic stress disorder. *Current Psychiatry Reports*, *16*(11), 505. doi:10.10 07/s11920-014-0505-5

Rupp, C. I., Beck, J. K., Heinz, A., Kemmler, G., Manz, S., Tempel, K., & Fleischhacker, W. W. (2016). Impulsivity and alcohol dependence treatment completion: Is there a neurocognitive risk factor at treatment entry? *Alcoholism: Clinical and Experimental Research*, *40*(1), 152-160. doi:10.1111/acer.12924

Sanvicente-Vieira, B., Kluwe-Schiavon, B., Corcoran, R., & Grassi-Oliveira, R. (2017). Theory of mind impairments in women with cocaine addiction. *Journal of Studies on Alcohol and Drugs*, *78*(2), 258-267. doi:10.15288/jsad.2017.78.258

Sashidharan, T., Pawlow, L. A., & Pettibone, J. C. (2012). An examination of racial bias in the Beck Depression Inventory-II. *Cultural Diversity and Ethnic Minority Psychology, 18*(2), 203-209. doi:10.1037/a0027689

Schnetzer, L. W., Schulenberg, S. E., & Buchanan, E. M. (2013). Differential associations among alcohol use, depression and perceived life meaning in male and female college students. *Journal of Substance Use*, *18*(4), 311-319. doi:10.3109/14659891.2012.661026

Selkie, E. M., Kota, R., Chan, Y. F., & Moreno, M. (2015). Cyberbullying, depression, and problem alcohol use in female college students: A multisite study. *Cyberpsychology, Behavior, and Social Networking*, *18*(2), 79-86. doi:10.1089/cyber.2014.0371

Sheperis, C., Young, J. S., & Daniels, M. H. (2010). *Counseling research: Quantitative, qualitative, and mixed methods*. Boston, MA: Pearson.

Sherman, A. C., & Simonton, S. (2012). Effects of personal meaning among patients in primary and specialized care: Associations with psychosocial and physical outcomes. *Psychology & Health*, *27*(4), 475-490. doi:10.1080/08870446.2011.592983

Sieber, J. E., & Tolich, M. B. (2013). Planning ethically responsible research (Vol. 31). Thousand Oaks, CA: Sage.

Singer, J. A., Singer, B. F., & Berry, M. (2013). A meaning-based intervention for addiction: Using narrative therapy and mindfulness to treat alcohol abuse. In *The experience of meaning in life* (pp. 379-391). Dordrecht, Netherlands: Springer. doi:10.1007/978-94-007-6527-6_28

Skarstein, S., Lagerløv, P., Kvarme, L. G., & Helseth, S. (2016). High use of over-the-counter analgesic; possible warnings of reduced quality of life in adolescents-a qualitative study. *BMC Nursing*, *15*(1), 16-27. doi:10.1186/s12912-016-0135-9

Skarstein, S., Rosvold, E. O., Helseth, S., Kvarme, L. G., Holager, T., Småstuen, M. C., & Lagerløv, P. (2014). High-frequency use of over-the-counter analgesics among adolescents: Reflections of an emerging difficult life, a cross-sectional study. *Scandinavian Journal of Caring Sciences*, *28*(1), 49-56. doi:10.1111/scs.12039

Sloboda, Z., McKetin, R., & Kozel, N. J. (2005). Use of archival data. In *Epidemiology of drug abuse* (pp. 63-78). New York, NY: Springer. doi:10.1007/0-387-24416-6_5

Smith, A. J. (2013). Logotherapy to treat substance abuse as a result of military-related PTSD. *Journal of Military and Government Counseling*, *1*(1), 61-74.

Spinhoven, P., Drost, J., van Hemert, B., & Penninx, B. W. (2015). Common rather than unique aspects of repetitive negative thinking are related to depressive and anxiety disorders and symptoms. *Journal of Anxiety Disorders*, *33*, 45-52. doi:10.1016/j.janxdis.2015.05.001

Stangor, C. (2014). *Research methods for the behavioral sciences.* Chicago, IL: Cengage Learning.

Steer, R. A., Ball, R., Ranieri, W. F., & Beck, A. T. (1997). Further evidence for the construct validity of the Beck Depression Inventory-II with psychiatric outpatients. *Psychological Reports*, *80*(2), 443-446. doi:10.2466/pr0.199 7.80.2.443

Steger, M. F. (2012). Making meaning in life. *Psychological Inquiry*, *23*(4), 381-385. doi:10.1080/1047840x.2012.720832

Steger, M. F., Dik, B. J., & Duffy, R. D. (2012). Measuring meaningful work: The work and meaning inventory (WAMI). *Journal of Career Assessment*, 20(3), 322-337. doi:1069072711436160.

Steger, M. F., Fitch-Martin, A. R., Donnelly, J., & Rickard, K. M. (2015). Meaning in life and health: Proactive health orientation links meaning in life to health variables among American undergraduates. *Journal of Happiness Studies*, *16*(3), 583-597. doi:10.1007/s10902-014-9523-6

Steger, M. F., Oishi, S., & Kesebir, S. (2011). Is a life without meaning satisfying? The moderating role of the search for meaning in satisfaction with life judgments. *Journal of Positive Psychology*, *6*(3), 173-180. doi:10.1080/17439760.2011.5 69171

Subica, A. M., Fowler, J. C., Elhai, J. D., Frueh, B. C., Sharp, C., Kelly, E. L., & Allen, J. G. (2014). Factor structure and diagnostic validity of the Beck Depression Inventory–II with adult clinical inpatients: Comparison to a gold-standard diagnostic interview. *Psychological Assessment*, *26*(4), 1106. doi:10.1037/a0036 998

Substance Abuse and Mental Health Services (SAMHSA) (2014). Behavioral health trends in the United States: *Results from the 2014 National Survey on Drug Use and Health.* pp 32-33. Retrieved from: https://www.samhsa.gov/data/sites/default/files/NSDUH-FRR1-2014/NSDUH-FRR1-2014.pdf

Sugarman, D. E., Kaufman, J. S., Trucco, E. M., Brown, J. C., & Greenfield, S. F. (2013). Predictors of drinking and functional outcomes for men and women following inpatient alcohol treatment. *The American Journal on Addictions, 23*, 226-233. doi:10.1111/j.1521-0391.2014.12098.x

Suwanphahu, B., Tuicomepee, A., & Kaemkate, W. (2016). Applying logotherapy to enhance the wellness of young delinquents with drug abuse. *Journal of Health Research*, *30*(4), 275-279.

The Treatment Center. (n.d.a). Retrieved from http://www.XXX.com/the-XXX-difference/

The Treatment Center. (n.d.b). Retrieved from http://www.XXX.com/mental-health-services/

The Treatment Center. (n.d.c). Retrieved from http://www.XXX.com/dual-diagnosis-treatment/

The Treatment Center. (2017). *Process and Procedures*. Unpublished internal document, The Treatment Center's company database.

Thompson, G. (2011). A meaning-centered therapy for addictions. *International Journal of Mental Health Addiction*, *10(3)*, 428–440. doi:10.1007/s11469-011-9367-9

Thompson, G. R. (2016). Meaning therapy for addictions: A case study. *Journal of Humanistic Psychology*, *56*(5), 457-482. doi:10.1177/0022167815585913

Thornton, L. K., Baker, A. L., Lewin, T. J., Kay-Lambkin, F. J., Kavanagh, D., Richmond, R., … & Johnson, M. P. (2012). Reasons for substance use among people with mental disorders. *Addictive Behaviors*, *37*(4), 427-434. doi:10.1016/ j.addbeh.2011.11.039

Trochim, W. M., Donnelly, J. P., & Arora, K. (2016). *Research methods knowledge base: Nonprobability sampling* (2nd edition). Boston, MA: Cengage Learning.

Van Deurzen, E., & Adams, M. (2011). *Skills in existential counseling & psychotherapy*. Thousand Oaks, CA: Sage.

Vartanian, T. P. (2011). Secondary Data Analysis. New York, NY: Oxford. doi:10.1093 /acprof:oso/9780195388817.001.0001

Veach, T. L., & Chappel, J.N. (1990). Physician attitudes in chemical dependency: The effects of personal experience and recovery. *Substance Abuse, 11*, 97–101.

Volkert, J., Schulz, H., Brütt, A. L., & Andreas, S. (2013). Meaning in life: Relationship to clinical diagnosis and psychotherapy outcome. *Journal of Clinical Psychology*, *70*(6), 528-535. doi:10.1002/jclp.22053

Vos, J. (2016). Working with meaning in life in mental health care: A systematic literature review of the practices and effectiveness of meaning-centered therapies. In *Clinical Perspectives on Meaning* (pp. 59-87). New York, NY: Springer. doi:10.1007/978-3-319-41397-6_4

Walden University. (2010). Research ethics review application to the Walden University Institutional Review Board requesting approval to conduct research. Retrieved from http://academicguides.waldenu.edu/researchcenter/orec/application

Walden University. (2011, June 28). Research ethics faqs for doctoral students in the clinical/intervention fields: Practical tips for avoiding delays and problems in the research approval process. Retrieved from http://academicguides.waldenu.edu /researchcenter/orec/guides

Whiteford, H. A., Degenhardt, L., Rehm, J., Baxter, A. J., Ferrari, A. J., Erskine, H. E., ... & Burstein, R. (2013). Global burden of disease attributable to mental and substance use disorders: findings from the Global Burden of Disease Study 2010. *Lancet*, *382*(9904), 1575-1586. doi:10.1016/S0140-6736(13)61611-6

Wilchek-Aviad, Y., & Malka, M. (2016). Religiosity, meaning in life and suicidal tendency among Jews. *Journal of Religion and Health*, *55*(2), 480-494. doi:10.1007/s10943-014-9996-y

Wolitzky-Taylor, K., Brown, L. A., Roy-Byrne, P., Sherbourne, C., Stein, M. B., Sullivan, G., ... & Craske, M. G. (2015). The impact of alcohol use severity on anxiety treatment outcomes in a large effectiveness trial in primary care. *Journal of Anxiety Disorders*, *30*, 88-93. doi:10.1016/j.janxdis.2014.12.011

Wolitzky-Taylor, K., Operskalski, J. T., Ries, R., Craske, M. G., & Roy-Byrne, P. (2011). Understanding and treating comorbid anxiety disorders in substance users: Review and future directions. *Journal of Addiction Medicine*, *5*(4), 233-247. doi:10.1097/ADM.0b013e31823276d7

Wong, P. T. P. (1998). Implicit theories of meaningful life and the development of the Personal Meaning Profile (PMP-B). In P. T. P. Wong & P. S. Fry (Eds.), *The human quest for meaning: A handbook of psychological research and clinical applications* (pp. 111–140). Mahwah, NJ: Erlbaum.

Wong, P. T. (Ed.). (2012). *The human quest for meaning: Theories, research, and applications (2nd Ed.)*. New York, NY: Routledge. doi:10.4324/9780203146286

Worden, B. L., Davis, E., Genova, M., & Tolin, D. F. (2015). Development of an anxiety sensitivity (AS) intervention for high-AS individuals in substance use disorders treatment. *Cognitive Therapy and Research*, *39*(3), 343-355. doi:10.1007/s10608-014-9666-0

Worley, M. J., Trim, R. S., Roesch, S. C., Mrnak-Meyer, J., Tate, S. R., & Brown, S. A. (2012). Comorbid depression and substance use disorder: Longitudinal associations between symptoms in a controlled trial. *Journal of Substance Abuse Treatment, 43*(3), 291-302. doi:10.1016/j.jsat.2011.12.010

Wüsthoff, L. E., Waal, H., & Gråwe, R. W. (2014). The effectiveness of integrated treatment in patients with substance use disorders co-occurring with anxiety and/or depression-a group randomized trial. *BMC Psychiatry*, *14*(1), 67-79. doi:10.1186/1471-244X-14-67

Yehuda, R., Spiegel, D., Southwick, S., Davis, L. L., Neylan, T. C., & Krystal, J. H. (2016). What I have changed my mind about and why. *European Journal of Psychotraumatology*, 7(1), 33768–33777. doi:10.3402/ejpt.v7.33768

Appendix A: XXX Data Use Agreement

XXX DATA USE AGREEMENT

This Data Use Agreement (“Agreement”), effective as of September 10,2017 (“Effective Date”), is entered into by and between Misty Grant (“Data Recipient”) and The XXXXX Center (“Data Provider”). The purpose of this Agreement is to provide Data Recipient with access to a Limited Data Set (“LDS”) for use in research in accord with the HIPAA and FERPA Regulations.

Definitions. Unless otherwise specified in this Agreement, all capitalized terms used in this Agreement not otherwise defined have the meaning established for purposes of the “HIPAA Regulations” codified at Title 45 parts 160 through 164 of the United States Code of Federal Regulations, as amended from time to time.

Preparation of the LDS. Data Provider shall prepare and furnish to Data Recipient a LDS in accord with any applicable HIPAA or FERPA Regulations

Data Fields in the LDS. **No direct identifiers such as names may be included in the Limited Data Set (LDS).** The researcher will also not name the organization in the doctoral project report that is published in Proquest. In preparing the LDS, Data Provider or designee shall include the **data fields specified as follows**, which are the minimum necessary to accomplish the research: Client data only; including specific demographics information (gender, age range, relationship status, drug of choice, treatment episode) and clients answers to the following assessments the Brief Substance Abuse Attitude Survey, Beck Depression Inventory II, Burns Anxiety Inventory, and

Brief Personal Meaning Profile (PMP-B). Responsibilities of Data Recipient. Data Recipient agrees to:

Use or disclose the LDS only as permitted by this Agreement or as required by law; Use appropriate safeguards to prevent use or disclosure of the LDS other than as permitted by this Agreement or required by law; Report to Data Provider any use or disclosure of the LDS of which it becomes aware that is not permitted by this Agreement or required by law; Require any of its subcontractors or agents that receive or have access to the LDS to agree to the same restrictions and conditions on the use and/or disclosure of the LDS that apply to Data Recipient under this Agreement; and Not use the information in the LDS to identify or contact the individuals who are data subjects.

Permitted Uses and Disclosures of the LDS. Data Recipient may use and/or disclose the LDS for its research activities only.

Term and Termination.

Term. The term of this Agreement shall commence as of the Effective Date and shall continue for so long as Data Recipient retains the LDS, unless sooner terminated as set forth in this Agreement.

Termination by Data Recipient. Data Recipient may terminate this agreement at any time by notifying the Data Provider and returning or destroying the LDS.

Termination by Data Provider. Data Provider may terminate this agreement at any time by providing thirty (30) days prior written notice to Data Recipient.

For Breach. Data Provider shall provide written notice to Data Recipient within ten (10) days of any determination that Data Recipient has breached a material term of

this Agreement. Data Provider shall afford Data Recipient an opportunity to cure said alleged material breach upon mutually agreeable terms. Failure to agree on mutually agreeable terms for cure within thirty (30) days shall be grounds for the immediate termination of this Agreement by Data Provider.

Effect of Termination. Sections 1, 4, 5, 6(e) and 7 of this Agreement shall survive any termination of this Agreement under subsections c or d.

Miscellaneous.

Change in Law. The parties agree to negotiate in good faith to amend this Agreement to comport with changes in federal law that materially alter either or both parties' obligations under this Agreement. Provided however, that if the parties are unable to agree to mutually acceptable amendment(s) by the compliance date of the change in applicable law or regulations, either Party may terminate this Agreement as provided in section 6.

Construction of Terms. The terms of this Agreement shall be construed to give effect to applicable federal interpretative guidance regarding the HIPAA Regulations.

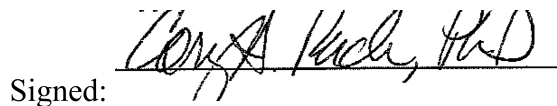
No Third Party Beneficiaries. Nothing in this Agreement shall confer upon any person other than the parties and their respective successors or assigns, any rights, remedies, obligations, or liabilities whatsoever.

Counterparts. This Agreement may be executed in one or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

Headings. The headings and other captions in this Agreement are for convenience and reference only and shall not be used in interpreting, construing or enforcing any of the provisions of this Agreement.

IN WITNESS WHEREOF, each of the undersigned has caused this Agreement to be duly executed in its name and on its behalf. The electronic signatures will serve

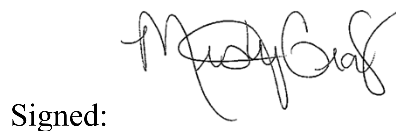
DATA PROVIDER

Signed: 

Print Name: XXX XXX____

Print Title: Executive Director

DATA RECIPIENT

Signed: 

Print Name: Misty Grant_____

Print Title: Student/Researcher

Appendix B: XXX Data Consent Form

Data Consent Form

This copy is for your records, which details the research data use policy.

A. ***We protect the identities of our clients. We will NOT use your personal identifying information.*** "Personally, identifying information" means information such as your first and last name, home address, and/or email address.

B. ***What information do we collect?*** *The XXXX Center measures and researches a variety of assessments to evaluate the ongoing effectiveness of the treatment being utilized with its clientele.* The information that will be collected is based upon both the demographic information such as age, gender, and ethnicity; as well as the assessments provided during a client's ongoing care while engaging in treatment at *The XXX Center.* We will use the data collected only for the purposes described in this notice. By participating in treatment, you agree that we may obtain this information and combine it in this way.

C. ***How will we use the information you and other clients provide us?*** We will use the information collected to provide data for a variety of research effectiveness information. **We use tools and methods to make sure that there is no reasonable possibility of identifying an individual client in the reports that we create.**

D. ***Do you provide my personal identifying information to anyone?*** Occasionally we work with other researchers for the purposes of data processing or research development. All researchers are bound to keep the information confidential and use it only for research or statistical purposes.

F. ***Participation is always voluntary.*** You may contact us if at any time you would like to see the personal identifying information we hold about you. You can also contact us if you wish us to stop using your own information. You can reach us at the number and address that appear below.

G. ***Data retention and security.*** We store your information for as long as needed for our research and analysis purposes and in accordance with law. Your information may be stored in the United States or elsewhere but in any event will be stored using administrative, managerial and technical measures to protect its confidentiality. Please remember that storage and communication of this data cannot always be one-hundred percent secure.

I. ***We may change this Privacy and Data Use Policy and our data collection and management practices.*** We reserve the right to update and make changes to this policy and to our practices in collecting and handling the data.

K. ***This Notice replaces any other statement, whether written or oral, made to you about our practices with respect to the collection and use of personal information.***

Appendix C: Permission to Use the Personal Meaning Profile – Brief

From: Paul TP Wong <XXX@gmail.com>

Subject: Re: PMP-B Permission to Use

Date: December 19, 2017 at 10:09:13 AM MST

To: Misty Grant <XXX@waldenu.edu>

Reply-To: XXX@gmail.com

Hi Misty,

I am pleased to grant you the permission to use Personal Meaning Profile-Brief for research purposes.

Best,

Paul

Paul T. P. Wong, Ph.D., C.Psych.

President, International Network on Personal Meaning

President, Meaning-Centered Counselling Institute Inc.

Appendix D: Permission to Use the Burns Anxiety Inventory

From: David Burns <XXX@feelinggood.com>

Subject: RE: Therapist Toolkit

Date: December 27, 2017 at 12:09:41 PM MST

To: 'Misty Grant' <XXX@me.com>

Sorry to be slow getting back to you, I've been traveling and now getting caught up. I need the order form for the toolkit, with your address and such.

I assume you are collecting data paper and pencil and not electronically. Also, when you publish the test in your dissertation, make sure it is filled out as a patient would fill it out, with a DO NOT COPY watermark. Thanks! david

David D. Burns, M.D.

Adjunct Clinical Professor Emeritus

Department of Psychiatry and Behavioral Sciences

Stanford University School of Medicine

Appendix E: Permission to Use the Beck Depression Inventory II

From: "Licensing, -" <XXX@pearson.com>

Subject: Fwd: Permissions Request

Date: December 26, 2017 at 11:53:32 AM MST

To: XXX@waldenu.edu

Dear Ms Grant

Pearson has no objection to your use of the Beck Depression Inventory®-II (BDI®-II) and you may consider this response as formal permission to use the BDI-II in your research, in the as-published formats, upon qualified purchase of the test materials in sufficient quantity to meet your research goals.

The BDI-II is a sensitive clinical assessment that requires a high degree (B Level) to purchase, administer, score and interpret. It also represents Pearson copyright and trade secret material. As such, **Pearson does not permit photocopying or other reproduction of our test forms by any means or for any purpose** when they are readily available in our catalogs.

Finally, because of test security concerns, permission is not granted for appending tests to theses, dissertations, or research reports of any kind. You may not include any actual assessment test items, discussion of any actual test items or inclusion of the actual assessment product in the body or appendix of your dissertation or thesis. You are only permitted to describe the test, its function and how it is administered; and discuss the fact that you used the Test; your analysis, summary statistics, and the results.

Regards,

William H. Schryver

Senior Legal Licensing Specialist

Please respond only to XXX@pearson.com

On Tue, Dec 19, 2017 at 2:12

PM, XXX@wladenu.edu <XXX@wladenu.edu> wrote:

The following is feedback submitted via the Contact Us page on:

www.PearsonClinical.com

===

Contact Information

===

Name: Misty Grant

Email Address: XXX@wladenu.edu

Telephone: 801-XXX-XXXX

Fax: 801-XXX-XXXX

Customer ID:

Position / Title: Doctoral Candidate

Company Name: Walden University

Address: XXXXXXXXXXX St

City, State, Zip: Murray, Utah, 84123

Country/Region: USA

==

Legal Department/Permission Requests

==

Title of Publication: BDI-II

Edition: Current Edition

Author (if available):

Copyright Date:

Brief Description of your request: I am a doctoral student from Walden University writing my dissertation titled Exploring the Relationships of Meaning, Co-occurring Diagnoses (Anxiety and Depression), and Attitudes about Substances, under the direction of my dissertation committee chair by Dr. Corinne Bridges. I would like your permission to use the Beck Depression Inventory II survey/questionnaire instrument in my archival research study.

Specific list of materials to reproduce: I will not be reproducing the assessment in any way, merely looking at the answers provided to me from the archival data.

Number of subjects/administrations or copies needed per year: 0, I have already purchased the BDI-II manual scoring complete kit that came with both the manual and 25 copies of the test.

Name of party responsible for tracking reproductions and payment of fees:

Inclusive Dates:

Adaptation and/or format changes required?

Is this request for permission to translate? No

Is this request for permission to use materials in a book? No

Appendix F: Permission to Use the Brief Substance Abuse Attitude Survey

Alcohol Research Documentation, Inc. LICENSE

TERMS AND CONDITIONS Jan 01, 2018

This is a License Agreement between Walden University -- Misty Grant ("You") and Alcohol Research Documentation, Inc. ("Alcohol Research Documentation, Inc.") provided by Copyright Clearance Center ("CCC"). The license consists of your order details, the terms and conditions provided by Alcohol Research Documentation, Inc., and the payment terms and conditions.

All payments must be made in full to CCC. For payment instructions, please see information listed at the bottom of this form.

License Number	4252630589946
License date	Dec 19, 2017
Licensed content publisher	Alcohol Research Documentation, Inc.
Licensed content title	Journal of studies on alcohol
Licensed content date	Jan 1, 1975
Type of Use	Thesis/Dissertation
Requestor type	Academic institution
Format	Electronic
Portion	page
Number of pages requested	2
The requesting person/organization is:	Misty Grant

Title or numeric reference of the portion(s) An instrument for measuring attitude, pages 50-51, table 3-8

Title of the article or chapter the portion is from Substance Abuse Attitude Survey: An instrument for measuring attitudes, portion is from page 50-51

Editor of portion(s) N/A

Author of portion(s) Chappel, J.N, Veach, T.L. & Krug, R.S.

Volume of serial or monograph. 6

Issue, if republishing an article from a serial 1

Page range of the portion 50-51

Publication date of portion 1985

Rights for Main product

Duration of use Current edition and up to 5 years

Creation of copies for the disabled no

With minor editing privileges no

For distribution to United States

In the following language(s) Original language of publication

With incidental promotional use no

The lifetime unit quantity of new product Up to 999

Title Exploring the Relationships of Meaning, Co-occurring Diagnoses, and Attitudes about Substances.

Instructor name Dr. Corinne Bridges

Institution name Walden University

Expected presentation date June 2018

Billing Type Invoice

Billing Address Walden University United States

Attn: Walden University

Total (may include CCC user fee) 0.00 USD

Terms and Conditions TERMS AND CONDITIONS

The following terms are individual to this publisher:

None

Other Terms and Conditions:

STANDARD TERMS AND CONDITIONS

1. Description of Service; Defined Terms. This Republication License enables the User to obtain licenses for republication of one or more copyrighted works as described in detail on the relevant Order Confirmation (the “Work(s)”). Copyright Clearance Center, Inc. (“CCC”) grants licenses through the Service on behalf of the rightsholder identified on the Order Confirmation (the “Rightsholder”). “Republication”, as used herein, generally means the inclusion of a Work, in whole or in part, in a new work or works, also as described on the Order Confirmation. “User”, as used herein, means the person or entity making such republication.

2. The terms set forth in the relevant Order Confirmation, and any terms set by the Rightsholder with respect to a particular Work, govern the terms of use of Works in connection with the Service. By using the Service, the person transacting for a republication license on behalf of the User represents and warrants that he/she/it (a) has

been duly authorized by the User to accept, and hereby does accept, all such terms and conditions on behalf of User, and (b) shall inform User of all such terms and conditions. In the event such person is a "freelancer" or other third party independent of User and CCC, such party shall be deemed jointly a "User" for purposes of these terms and conditions. In any event, User shall be deemed to have accepted and agreed to all such terms and conditions if User republishes the Work in any fashion.

3. Scope of License; Limitations and Obligations.

3.1 All Works and all rights therein, including copyright rights, remain the sole and exclusive property of the Rightsholder. The license created by the exchange of an Order Confirmation (and/or any invoice) and payment by User of the full amount set forth on that document includes only those rights expressly set forth in the Order Confirmation and in these terms and conditions, and conveys no other rights in the Work(s) to User. All rights not expressly granted are hereby reserved.

3.2 General Payment Terms: You may pay by credit card or through an account with us payable at the end of the month. If you and we agree that you may establish a standing account with CCC, then the following terms apply: Remit Payment to: Copyright Clearance Center, 29118 Network Place, Chicago, IL 60673-1291. Payments Due: Invoices are payable upon their delivery to you (or upon our notice to you that they are available to you for downloading). After 30 days, outstanding amounts will be subject to a service charge of 1-1/2% per month or, if less, the maximum rate allowed by applicable law. Unless otherwise specifically set forth in the Order Confirmation or in a separate written agreement signed by CCC, invoices are due and payable on "net 30"

terms. While User may exercise the rights licensed immediately upon issuance of the Order Confirmation, the license is automatically revoked and is null and void, as if it had never been issued, if complete payment for the license is not received on a timely basis either from User directly or through a payment agent, such as a credit card company.

3.3 Unless otherwise provided in the Order Confirmation, any grant of rights to User (i) is “one-time” (including the editions and product family specified in the license), (ii) is non-exclusive and non-transferable and (iii) is subject to any and all limitations and restrictions (such as, but not limited to, limitations on duration of use or circulation) included in the Order Confirmation or invoice and/or in these terms and conditions. Upon completion of the licensed use, User shall either secure a new permission for further use of the Work(s) or immediately cease any new use of the Work(s) and shall render inaccessible (such as by deleting or by removing or severing links or other locators) any further copies of the Work (except for copies printed on paper in accordance with this license and still in User's stock at the end of such period).

3.4 In the event that the material for which a republication license is sought includes third party materials (such as photographs, illustrations, graphs, inserts and similar materials) which are identified in such material as having been used by permission, User is responsible for identifying, and seeking separate licenses (under this Service or otherwise) for, any of such third party materials; without a separate license, such third party materials may not be used.

3.5 Use of proper copyright notice for a Work is required as a condition of any license granted under the Service. Unless otherwise provided in the Order Confirmation,

a proper copyright notice will read substantially as follows: “Republished with permission of [Rightsholder’s name], from [Work's title, author, volume, edition number and year of copyright]; permission conveyed through Copyright Clearance Center, Inc. ” Such notice must be provided in a reasonably legible font size and must be placed either immediately adjacent to the Work as used (for example, as part of a by-line or footnote but not as a separate electronic link) or in the place where substantially all other credits or notices for the new work containing the republished Work are located. Failure to include the required notice results in loss to the Rightsholder and CCC, and the User shall be liable to pay liquidated damages for each such failure equal to twice the use fee specified in the Order Confirmation, in addition to the use fee itself and any other fees and charges specified.

3.6 User may only make alterations to the Work if and as expressly set forth in the Order Confirmation. No Work may be used in any way that is defamatory, violates the rights of third parties (including such third parties' rights of copyright, privacy, publicity, or other tangible or intangible property), or is otherwise illegal, sexually explicit or obscene. In addition, User may not conjoin a Work with any other material that may result in damage to the reputation of the Rightsholder. User agrees to inform CCC if it becomes aware of any infringement of any rights in a Work and to cooperate with any reasonable request of CCC or the Rightsholder in connection therewith.

4. Indemnity. User hereby indemnifies and agrees to defend the Rightsholder and CCC, and their respective employees and directors, against all claims, liability, damages, costs and expenses, including legal fees and expenses, arising out of any use of a Work

beyond the scope of the rights granted herein, or any use of a Work which has been altered in any unauthorized way by User, including claims of defamation or infringement of rights of copyright, publicity, privacy or other tangible or intangible property.

5. Limitation of Liability. UNDER NO CIRCUMSTANCES WILL CCC OR THE RIGHTSHOLDER BE LIABLE FOR ANY DIRECT, INDIRECT, CONSEQUENTIAL OR INCIDENTAL DAMAGES (INCLUDING WITHOUT LIMITATION DAMAGES FOR LOSS OF BUSINESS PROFITS OR INFORMATION, OR FOR BUSINESS INTERRUPTION) ARISING OUT OF THE USE OR INABILITY TO USE A WORK, EVEN IF ONE OF THEM HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. In any event, the total liability of the Rightsholder and CCC (including their respective employees and directors) shall not exceed the total amount actually paid by User for this license. User assumes full liability for the actions and omissions of its principals, employees, agents, affiliates, successors and assigns.

6. Limited Warranties. THE WORK(S) AND RIGHT(S) ARE PROVIDED “AS IS”. CCC HAS THE RIGHT TO GRANT TO USER THE RIGHTS GRANTED IN THE ORDER CONFIRMATION DOCUMENT. CCC AND THE RIGHTSHOLDER DISCLAIM ALL OTHER WARRANTIES RELATING TO THE WORK(S) AND RIGHT(S), EITHER EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. ADDITIONAL RIGHTS MAY BE REQUIRED TO USE ILLUSTRATIONS, GRAPHS, PHOTOGRAPHS, ABSTRACTS, INSERTS OR

OTHER PORTIONS OF THE WORK (AS OPPOSED TO THE ENTIRE WORK) IN A MANNER CONTEMPLATED BY USER; USER UNDERSTANDS AND AGREES THAT NEITHER CCC NOR THE RIGHTSHOLDER MAY HAVE SUCH ADDITIONAL RIGHTS TO GRANT.

7. Effect of Breach. Any failure by User to pay any amount when due, or any use by User of a Work beyond the scope of the license set forth in the Order Confirmation and/or these terms and conditions, shall be a material breach of the license created by the Order Confirmation and these terms and conditions. Any breach not cured within 30 days of written notice thereof shall result in immediate termination of such license without further notice. Any unauthorized (but licensable) use of a Work that is terminated immediately upon notice thereof may be liquidated by payment of the Rightsholder's ordinary license price therefor; any unauthorized (and unlicensable) use that is not terminated immediately for any reason (including, for example, because materials containing the Work cannot reasonably be recalled) will be subject to all remedies available at law or in equity, but in no event to a payment of less than three times the Rightsholder's ordinary license price for the most closely analogous licensable use plus Rightsholder's and/or CCC's costs and expenses incurred in collecting such payment.

8. Miscellaneous.

8.1 User acknowledges that CCC may, from time to time, make changes or additions to the Service or to these terms and conditions, and CCC reserves the right to send notice to the User by electronic mail or otherwise for the purposes of notifying User

of such changes or additions; provided that any such changes or additions shall not apply to permissions already secured and paid for.

8.2 Use of User-related information collected through the Service is governed by CCC's privacy policy, available online here: http://www.copyright.com/content/cc3/en/tools/footer/privacypolicy.html.

8.3 The licensing transaction described in the Order Confirmation is personal to User. Therefore, User may not assign or transfer to any other person (whether a natural person or an organization of any kind) the license created by the Order Confirmation and these terms and conditions or any rights granted hereunder; provided, however, that User may assign such license in its entirety on written notice to CCC in the event of a transfer of all or substantially all of User's rights in the new material which includes the Work(s) licensed under this Service.

8.4 No amendment or waiver of any terms is binding unless set forth in writing and signed by the parties. The Rightsholder and CCC hereby object to any terms contained in any writing prepared by the User or its principals, employees, agents or affiliates and purporting to govern or otherwise relate to the licensing transaction described in the Order Confirmation, which terms are in any way inconsistent with any terms set forth in the Order Confirmation and/or in these terms and conditions or CCC's standard operating procedures, whether such writing is prepared prior to, simultaneously with or subsequent to the Order Confirmation, and whether such writing appears on a copy of the Order Confirmation or in a separate instrument.

8.5 The licensing transaction described in the Order Confirmation document shall be governed by and construed under the law of the State of New York, USA, without regard to the principles thereof of conflicts of law. Any case, controversy, suit, action, or proceeding arising out of, in connection with, or related to such licensing transaction shall be brought, at CCC's sole discretion, in any federal or state court located in the County of New York, State of New York, USA, or in any federal or state court whose geographical jurisdiction covers the location of the Rightsholder set forth in the Order Confirmation. The parties expressly submit to the personal jurisdiction and venue of each such federal or state court. If you have any comments or questions about the Service or Copyright Clearance Center, please contact us at 978-750-8400 or send an e-mail to info@copyright.com. v 1.1 Questions? customercare@copyright.com or +1-855-239-3415 (toll free in the US) or +1-978-646-2777.