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# BEHAVIORAL HEALTH PROFESSIONAL'S PERCEPTIONS OF EARLY CO-OCCURRING DISORDER RECOVERY AND SMOKING CESSATION APPROPRIATENESS

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SMOKING CESSATION APPROPRIATENESS

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A Project  
Presented to the  
Faculty of  
California State University,  
San Bernardino

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In Partial Fulfillment  
of the Requirements for the Degree  
Master of Social Work

---

by  
Paul Terrazas  
June 2015

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Approved by:

Dr. Cory Dennis, Faculty Supervisor, Social Work  
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## ABSTRACT

Early stages of the co-occurring, mental health and substance use disorder (MH-SUD) recovery process present various social and physical challenges to the recovering person, including habitual cigarette smoking. Presenting smoking cessation to a person with a co-occurring disorder could also depend on behavioral health professional's perceptions of implementing supplemental services in early recovery. Behavioral health professionals also face the challenge of assessing people's motivation to quit smoking. Data was collected through an online survey that shaped this quantitative, cross-sectional study focused on understanding perceptions of smoking cessation in early MH-SUD recovery. The study's data highlighted that the participants (N = 61) perceive smoking cessation as an appropriate intervention while also reporting high levels of self-confidence when assessing motivation to quit to smoking. Identifying as a smoker and former smoker, highest level of education and gender did not have a significant impact on perceptions of smoking cessation in early MH-SUD recovery. The study created an overview on how behavioral health professionals understand and support smoking cessation that contributes additional knowledge to social work's existing research on habitual cigarette smoking and co-occurring disorders.

*Keywords:* Mental Health and Substance Use Disorder (MH-SUD),  
co-occurring, early recovery, smoking cessation, behavioral health  
professional and perceptions.

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To my Mom and Dad, Sarah, Koti, Kenzie, my family and friends, thank you for your patience as I completed this project and journey.

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## DEDICATION

This project is dedicated to my source of inspiration and determination,  
my son Paul Joseph Kauber.



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## CHAPTER ONE

### INTRODUCTION

Using smoking cessation interventions that target habitual cigarette smoking have previously been considered when discussing the treatment engaged, recovery orientated mental health and substance use disorder (MH-SUD) population. The desire to quit smoking and the perceptions of behavioral health professionals should be considered when discussing smoking cessation appropriateness in early MH-SUD recovery. In 2009, there were 8.9 million people in the United States of America who reported having a mental health and substance use disorder and 7.4 % reported having received treatment for their co-occurring disorder (SAMHSA, 2010). Both the recovering person and the behavioral health professional may hesitate to consider implementing smoking cessation interventions into the co-occurring treatment and recovery environment.

There is a preconceived notion that implementing too many life changes in a person's recovery may destabilize and hinder the process (Baker, Bonevski, Deane, Kay-Lambkin, Kelly, & Tregarthen, 2012). However, the behavioral health professional's perception of smoking cessation may also influence the notion of addressing habitual cigarette smoking in conjunction with treating co-occurring disorders. A study on treatment of smokers and MH-SUD integrated treatment revealed that cigarette smoking among the MH-SUD population is known to be a prevailing and mutual part of the

treatment related recovery process (Hall & Prochaska, 2009). Quitting smoking during participating in the MH-SUD recovery process has become a notable, societal issue.

### Early Recovery Environment Definition

This project's notion of the early recovery stages in the MH-SUD environment warrants definition and interpretation. A recent study on abstinence from illicit drugs and treatment of physical and health problems in co-occurring patients noted that people within a six month period of post-treatment observation showed a substantial reduction of alcohol and cigarette use (Grella, Stein, & Zane, 2012). Time frames conducive to early stages of treatment and recovery are crucial in co-occurring disorders, as detoxification and medication stabilization occur simultaneously. For the purpose of this discussion on behavioral health professional's perceptions of co-occurring disorders and smoking cessation appropriateness in the early recovery environment, the first six months of abstinence from illicit substances, mental health stabilization and participation in treatment-recovery orientated services will be referred to as early recovery.

### Problem Statement

Severe mental illness and habitual cigarette smoking have negative societal implications. In an eleven-year longitudinal study of people with severe mental illness, substance use disorders and smoking problems

Brunette, Drake, Ferron, He, McHugo, and Xie (2011) noted that the majority of study's participants attempted to stop smoking, however, were unsuccessful during the eleven-year monitoring time frame. People with co-occurring disorders may have difficulties quitting smoking without an appropriate support system. Furthermore, statistics on American adults with a mental illness in 2009 show that 37% smoked cigarettes in an one-month span, as compared to 22% of adults who were non-smokers (SAMSHA, 2013). However, smoking cigarettes can present social and physical barriers to the process of recovery and can potentially have negative effects on the overall welfare of the person participating in early MH-SUD recovery. In another study on people with severe mental illness, substance use disorders and attempts on quitting smoking, it was concluded that there are low rates of smoking cessation success when attempts to quit smoking are not facilitated by a specialist (Brunette et al., 2011).

In a recent study of adolescents in a substance use disorder residential treatment setting, it was noted that youths who smoke cigarettes and are diagnosed with a co-occurring disorder, have higher rates of being susceptible to developing a substance use or an alcohol related problem (Alam, Douglass, Fortuna, Kim, & Porche, 2012). Regardless of age, early MH-SUD recovery presents challenges to the person transitioning into the recovery-orientated process, particularly if the effects of habitual cigarette smoking are combined with the co-occurring disorder. Habitual cigarette smokers that also have a

co-occurring disorder struggle with nicotine dependence, substance use disorders and mental illness that may influence the behavioral health professional's perception of the utilization of smoking cessation interventions during the early MH-SUD recovery stage.

### Purpose of the Study

The guiding purpose of this study is to present information on perceptions of behavioral health professionals as they face the challenge of assessing smoking cessation appropriateness in early MH-SUD recovery. The challenge is to assess levels of smoking cessation appropriateness while considering the person's internal desire and motivation to quit smoking. Additionally, the choice to continue smoking, despite the negative physical and mental health issues that cigarettes cause needs to be considered while assessing smoking cessation appropriateness in early MH-SUD recovery. There are mental health and substance abuse treatment professionals that perceive smoking cessation to be impractical in co-occurring treatment environments (Morris & Schroeder, 2010). However, behavioral health professional's perception of smoking cessation may vary in nature.

In a recent study on mental health counselors and smoking cessation, Dake, Jordan, Price, Price, and Sidani (2011) noted, "... this study found that the majority of counselors have not even considered regularly asking clients about smoking status" (p. 279). Professionals in behavioral health settings have many therapeutic concerns to address, which include the implications



smoking cessation has on co-occurring treatment and early recovery settings. However, there is also an existing generation of behavioral health professionals that encourage smoking cessation in the early MH-SUD recovery stages.

This study also focused on behavioral health professional's confidence in assessing people's motivation to quit smoking in the first six months of early MH-SUD recovery. The participating behavioral health professionals were presented with an opportunity to express their confidence level when addressing smoking cessation appropriateness in the early MH-SUD stages of recovery that complements the purpose of this study of overall perceptions, conducive to the respective subject matter.

#### Significance of the Project for Social Work

From a social work perspective, smoking cessation and early MH-SUD recovery affect the person in their environment while connecting to sub-systems such as MH-SUD treatment and recovery-oriented services. There are both, mental and physical health reasons why smoking cessation may be appropriate in early co-occurring disorder recovery. Smoking may be considered to have more detrimental effects on people with a substance use disorder than the physical, negative consequences of illicit drug use (Baca & Yahne, 2008). Smoking cessation, MH-SUD treatment and recovery-orientated activities may have a positive impact on people who are motivated to consider quitting smoking in early recovery. Viewpoints on how

tobacco impacts people are often minimized in comparison to illegal drugs, as tobacco is considered to be permissible a drug (Prochaska, 2010).

Perceptions of tobacco use and smoking cessation provides significant insight into a social work related, mental health or substance use disorder treatment episode. Baca and Yahne (2008) noted on treating illicit substance use and tobacco related issues, “In substance abuse treatment, we tend to concentrate on treating illicit substances and alcohol, yet tobacco disease and death outweigh that of other substances” (p. 207). Since tobacco could be considered a legal and fatal drug, should behavioral health professionals promote mental health wellness, treat symptoms of substance use disorders and implement smoking cessation in the early stages of MH-SUD recovery?

Behavioral health professionals that work within the social work related, co-occurring disorder environment face the challenge of considering an appropriate time frame to introduce smoking cessation. It is also important to note possible reasons why people with a co-occurring disorder may smoke cigarettes. Similar to traditional societal tobacco use, people with co-occurring disorders use tobacco products, such as cigarettes, to alleviate negative physical and emotional reactions from daily living (Morris & Schroeder, 2010). Other reasons why people with mental illness smoke were highlighted by Aubin, Rollema, Svensson, and Winterer (2012) “The disproportionate reward value attributed to smoking by patients with schizophrenia or depression could be due to the strong reinforcing effect of nicotine, utilized as a form of

self-medication” ( p. 275). There are notable reasons why people with co-occurring disorders could benefit from smoking cessation interventions, validating the importance of this study related to tobacco use, co-occurring disorders, aspects of social work and the person in the environment.

### Research Question

Considering the challenges that behavioral health professionals face when developing their perception of smoking cessation in early MH-SUD recovery, many questions remain unanswered on the respective subject matter. Foci on health related issues, smoking cessation and impacts on behavioral health professionals, conducive to early MH-SUD recovery have been noted thus far. The information in this discussion assists in presenting the study’s research question: Per the perception of behavioral health professionals, is smoking cessation an appropriate intervention in the first six months of early MH-SUD recovery?

## CHAPTER TWO

### LITERATURE REVIEW

#### Introduction

Contrasting information regarding early mental health and substance use disorders (MH-SUD) recovery and smoking cessation appropriateness will be highlighted in the following chapter. Concepts from the Self Determination Theory (STD) perspective serves as the foundational theoretical framework, conducive to associating motivating factors regarding quitting smoking and how behavioral health professionals assess the level of smoking cessation appropriateness in early MH-SUD recovery. Critical information on smoking cessation related interventions that are utilized within MH-SUD population are also emphasized in this study's literature review.

#### Challenges in Early MH-SUD Recovery

##### Collaboration

Smoking cessation appropriateness in MH-SUD early recovery warrants collaborative efforts between the person in recovery and the behavioral health professional. In a study's results on quitting smoking and people with serious mental illness, McDevitt, Painter, and Synder (2008) noted that freedom to choose to be a current or former smoker was considered a significant and personal issue due to lack of self-assurance that they can remain abstinent from cigarettes. Collaboration, encouragement and making smoking cessation available from a behavioral health professional's

perspective, offers meaningful support to the recovering co-occurring disorder culture. Both the recovering person and the behavioral health professional has the opportunity to work together as a team, mutually assessing the appropriate phase to implement smoking cessation into the early MH-SUD recovery environment of the individual.

### Oppositions

There are notable arguments that demonstrate smoking cessation is not an effective intervention in the MH-SUD recovery process. Conclusions in a study on smoking cessation and people with co-occurring disorders within a tobacco dependence treatment clinic noted that substance use and mental health disorders do not contribute to successful and positive outcomes regarding smoking cessation (Khara & Okoli, 2011). One can entertain the notion that using smoking cessation interventions in early MH-SUD recovery can possibly present a disruption to the challenging process of recovery. A study on physical health and co-occurring disorders noted that although people were presented with information on the substantial harmful effects of unhealthy behaviors such as cigarette smoking, their lifestyle remained unchanged (Grella, Stein, & Zane, 2012). It is also important to note that behavioral health professionals may hesitate to implement smoking cessation in an early recovery environment due to lack of motivation to quit smoking. The Centers for Disease Control and Prevention (2015) noted, "Current cigarette smoking among U.S. adults declined from 20.9% (an estimated 45.1

million persons) in 2005 to 17.8% (42.1 million) in 2013...” (para. 4). Smoking cessation interventions continue to be an area of importance when discussing health and treatment related issues, conducive to mental health and substance use disorders.

### Impact on Health

By successfully treating MH-SUD and habitual cigarette smoking simultaneously, the person in early recovery may have a better chance of developing physical and mental health stability. Eby and Rothrauff (2011) noted on health benefits, smoking cessation and substance abuse treatment, “... providing tobacco cessation treatment, in addition to alcohol and drug abuse treatment, has many potential short and long-term health benefits and should be made a high priority” (p. 56). Promoting physical health concerns and introducing smoking cessation in the midst of early recovery has the potential to increase the likelihood of achieving a healthy lifestyle during MH-SUD early recovery. Smoking cessation can be considered a supplemental addition to the MH-SUD treatment episode and reduce health risks caused by habitual smoking. Treatments that are geared towards addressing tobacco use should be standard practice throughout systems of care that address substance use disorders (Morris & Schroeder, 2010).

There continues to be an array of health benefits and oppositions that influence behavioral health professional’s perceptions of utilizing smoking cessation interventions in early MH-SUD settings. Identified health risks due to

habitual cigarette smoking that are presented to the person in early MH-SUD recovery can potentially cause further problems, which warrants further research and studies on the respective subject matter.

### Theory Guiding Conceptualization

Concepts behind Self Determination Theory (SDT) can assist in creating a framework to guide the conversation on behavioral health professional's perception of smoking cessation appropriateness, while assessing the person's motivation to quit smoking in early co-occurring MH-SUD recovery. Motivational intentions are key in discussing the early MH-SUD recovery environment and smoking cessation, as levels of interests, and pre-determined perceptions on quitting smoking vary throughout the respective population. SDT focuses on types of motivation labeled autonomous motivation, controlled motivation, and amotivation that contribute to personal, life changing results (Deci & Ryan, 2008). There is also a level of self-confidence and willingness that the person in early MH-SUD recovery embraces when contemplating the utilization of smoking cessation services.

In regards to this study, motivation to use smoking cessation services in early MH-SUD recovery is contemplated by the person that is ready to quit smoking and is assessed by the respective behavioral health professional. Deci, Gagne, Ryan, and Willams (2002) noted in an article on smoking cessation and autonomous motivation that the notion of perceived competence could be interpreted as the way a person foresees that they can

obtain objectives while participating in smoking cessation. Autonomous motivation serves as the major concept and focus from SDT that guides the discussion on challenges with motivation to quit smoking and how behavioral health professionals view this societal issue within the MH-SUD recovering population. Associating autonomous motivation with early MH-SUD recovery and smoking cessation constructs the theoretical framework to this study.

### Autonomous Motivation

Autonomy has various interpretations, which depends on individual perspectives and respective societal environments. Autonomous motivation, perceptions of behavioral health professionals and smoking cessation has been combined as a SDT theoretical perspective approach to this study. Autonomous motivation consists of internal and external sources of inspiration that enhances self-worth when discussing a particular action a person applies value towards (Deci & Ryan, 2008). Autonomous motivation can help with internalizing problems that need to be addressed by a recovering person, such as their internal desire to quit smoking in early MH-SUD recovery. It is possible that a recovering person can internalize values that are associated with quitting smoking during early MH-SUD recovery.

The first six months of MH-SUD recovery presents an array of challenges to a recovering person, which autonomous motivation can alleviate by providing a conceptual, emotional and cognitive support system advantageous towards the efforts of quitting smoking. According to Deci and



Ryan (2008) individuals that are motivated through autonomous motivation are empowered through choice and have the ability to support their action through internal motivations. Hence, autonomous motivation creates a sense of empowerment towards decision making for the recovering person struggling with habitual cigarette smoking and tobacco addiction. While discussing autonomous motivation within the SDT, Deci et al. (2002) stressed that one can control behaviors more independently when the value is accepted internally. The motivation to quit smoking is proposed to be internalized through autonomous motivation, conducive to this study's focus on people in the first six months of early MH-SUD recovery.

#### Assessing Autonomous Motivation

Behavioral health professionals face the challenge of assessing motivation to quit smoking and the immanent risk of substance abuse or psychiatric relapse, which outlines this project's notion of smoking cessation appropriateness in early MH-SUD recovery. When is the appropriate time to implement smoking cessation in early MH-SUD recovery? In an article on testing an SDT intervention and motivation conducive to smoking cessation Deci, Koudes, Levesque, McGregor, Ryan, Sharp, and Williams (2006) noted that autonomous motivation is achieved when a person can make critical decisions while they are monitoring their behavior. Behaviors could influence the perceptions of behavioral health professionals on smoking cessation in early MH-SUD recovery. STD offers significant insight on both smoking

cessation appropriateness and behavioral aspects in the MH-SUD early recovery environment. STD also offers different theoretical viewpoints to the behavioral health professional when assessing the person's motivation to address habitual cigarette smoking in the early MH-SUD recovery process.

### Intervention Concepts Defined

Strategic interventions tailored to treating co-occurring disorders are key when working with the individual in early recovery. A study on co-occurring disorders and treatment prospects, conducive to perceived best practices, acknowledged that it is beneficial for clients to have access to integrated co-occurring disorder treatment services in one clinical setting (Brown & Flynn, 2008). Having co-occurring disorder treatment and smoking cessation available in one location can encourage the person in recovery to contemplate quitting smoking while engaging in treatment. In another study on specific interventions targeting co-occurring disorders, it was highlighted that when addressing both the mental illness and the substance use disorder of a person, treating smoking problems should be highly considered as well (Connolly & Kavanagh, 2009). Respectively, the early MH-SUD recovery stage presents a suitable opportunity to introduce smoking cessation into the individual's environment.

It is important to note that interventions and smoking cessation may not be a good fit when combined with co-occurring disorder treatment. New participants in treatment centers during early stages of recovery display high

levels of symptoms caused by their co-occurring disorders, making smoking cessation concepts less attractive (Connolly & Kavanagh, 2009). There are notable oppositions towards smoking cessation interventions in early co-occurring disorder recovery. However, another recent study on smoking and people with psychiatric problems highlighted that there is a significant amount of nicotine addiction in treatment environments and limited means to address co-occurring disorders, therefore, best practices should strongly sway towards treating nicotine addiction among clients who smoke (Aubin et al., 2012). Interventions such as smoking cessation in early MH-SUD recovery present a holistic treatment approach to the recovering environment.

#### Contribution to Existing Knowledge

Similar studies regarding substance abuse, mental health problems and smoking cessation have been conducted. However, there are scarce amounts of scholarly resources on counselor's perceptions and integration of smoking cessation in treatment settings (Knudsen, Studts, & Studts, 2012). More resources are needed on behavioral health professional's perceptions of smoking cessation that will address the ongoing debate that quitting smoking in early MH-SUD recovery may cause a person to have a relapse or decompensate while participating in treatment. This study on early MH-SUD recovery and behavioral health professional's perception of smoking cessation appropriateness adds to the existing knowledge base by challenging the participants to rate their knowledge base on the subject matter. The study's

answers to the research question create a perspective of knowledge that focuses on early MH-SUD recovery that could contribute to social work's overall understanding of smoking cessation. This study will focus solely on the perceptions on smoking cessation appropriateness that isolate the first six months of MH-SUD recovery, which will be distinct compared to current scholarly research.

### Summary

A collaborative effort on determining the appropriate phase of early MH-SUD recovery to implement smoking cessation is key for the recovering person and the behavioral health professional. However, smoking cessation success rates are shown to be inconsistent at times, which was highlighted in the *Challenges in MH-SUD Recovery* section. Self-Determination Theory offers autonomous motivation as a theoretical approach to this study's notion of smoking cessation appropriateness in the early MH-SUD environment. Behavioral health professional's assessment of motivation and behaviors, conducive to autonomous motivation was highlighted as a factor in determining smoking cessation appropriateness in early MH-SUD recovery as well. Lastly, intervention concepts within the MD-SUD recovery-setting offer a therapeutic overview on the importance of addressing smoking cessation in the early phases of treatment-oriented services, which is an essential component to this project's six-month definition of early recovery.

## CHAPTER THREE

### METHODS

#### Introduction

The quantitative, cross-sectional study design outlining how behavioral health professionals perceives smoking cessation in early mental health and substance use disorder (MH-SUD) recovery will be highlighted in the following chapter. Information on sampling size, data collection methods and the project's survey instrument (Appendix A) follows the study design section, which will highlight the population and methods that were used to collect the essential data. The procedures and the protection of human subjects section will also reveal the data collection methods and highlight the rationale for how the study did not cause harm to the participants. Lastly, the data analysis section highlights the methods and statistical testing techniques that were utilized to present the results of the data sets.

#### Study Design

A quantitative, cross-sectional research design was utilized to present the results of the study on perceptions of smoking cessation and early MH-SUD recovery, per the respective behavioral health professionals that participated. According to Grinnell and Unrau (2011) cross-sectional research designs create opportunities to use survey data collection methods at only one particular point of a time period. A survey consisting of questions regarding

standard demographics, behavioral health professional perceptions conducive to their knowledge base on smoking cessation and confidence ratings on addressing smoking in the first six months of early co-occurring disorder recovery was developed for this study. The survey utilized five-point Likert scaled questions to gather the data from the participating behavioral health professionals. The survey results were utilized to explore the variations in perceptions that behavioral health professionals have developed towards early MH-SUD recovery and smoking cessation services.

In a study regarding perceptions of mental health and substance abuse disorder treatment in primary care settings authors Alvarez et al. (2012) noted on cross-sectional surveys, "... questionnaires were modified to (1) standardize the responses to most questions by using the same five-point Likert scale with the same anchors, ranging from disagree strongly to agree strongly" (p. 293). Similar five-point Likert scale questions were used to gather data for this study. The data collected from the survey participants that will be presented in Chapter 4 has been utilized to answer the following research question: Per the perception of behavioral health professionals, is smoking cessation an appropriate intervention in the first six months of early MH-SUD recovery?

The quantitative results of this study's design allowed for data analysis of the different types of behavioral health educational disciplines correlated with perceptions of smoking cessation services in early MH-SUD recovery.

Other main variables that were analyzed were self-reports of confidence in assessing motivation to quit smoking and perceptions of the utilization of smoking cessation services in early MH-SUD recovery that were also correlated with study participants that identified as current smokers and former smokers. Lastly, gender was also correlated with key perceptions of smoking cessation in early MH-SUD recovery.

### Sampling

The sample of this study consisted of behavioral health professionals working within the mental health and substance use disorder treatment profession in the Los Angeles, Orange, Riverside, San Bernardino and San Diego county areas of Southern California. It is important to note that there was no client or identifying information involved during the data collection, however, each county offers an array of client centered, behavioral health treatment services within their system of care. The behavioral health professionals were strategically chosen and identified as employees, interns and volunteers that work within established MH-SUD treatment and recovery environments in the respective Southern California counties mentioned previously.

For the mental health treatment profession, data was collected from various behavioral health professionals that provide administrative oversight and facilitate services under their respective scope of practice and educational disciplines. In the substance use disorder treatment profession, data was

collected from registered, credentialed or certified substance use disorder counselors that are often referred to as alcohol and drug counselors. Data was also collected from behavioral health professionals that work within community based organizations that require various educational and internship experience that is contingent to their employment or volunteer status. Since the behavioral health profession consists of an array of educational disciplines, other esteemed professionals affiliated with MH-SUD recovery were presented with the opportunity to participate in the study as well.

#### Data Collection and Instruments

Data was collected from various levels of behavioral health professionals that work within or have a general understanding of early MH-SUD treatment and recovery environments. Variables that are identified in the study's survey include: educational levels and disciplines, years of service in the behavioral health profession, opinions on smoking cessation services, minimal knowledge base on smoking cessation availability in the respective surrounding counties and perceived self-confidence in assessing people's motivation to quit smoking in early co-occurring MH-SUD recovery. Also, standard demographic questions provided an opportunity to collect current societal affiliations and self-reported associations with being a smoker or a former smoker, which was used to assess perceptions of smoking cessation appropriateness to other variables within the survey instrument.



As discussed in the *Contributions to Existing Knowledge* section in Chapter Two, this study is unique in comparison to other existing studies on co-occurring disorders and smoking cessation, as the focus is isolated to the first six months of recovery. Therefore, a tailored survey for this study was developed using a five point Likert scale and demographic related questions. The study's survey was developed to isolate and present data on perceptions of behavioral health professionals. An existing scale was added to the survey that measured perceived confidence levels.

The Perceived Competency Scale (PCS) was adapted from Self Determination Theory (SDT) that represents this study's theoretical framework. The PCS uses averages to measure levels of confidence that a person has towards a subject matter. According to the website *Self Determination Theory: An Approach to Human Motivation and Personality*, "Because the PCS pertains to particular behaviors or behavioral domains, it can be easily adapted to study additional behaviors or behavioral domains" (Self Determination Theory-Questionnaires, 2015, April 08, para. 6). The PCS in this study's survey instrument was adapted to show the level of confidence behavioral health professionals have towards assessing willingness towards quitting smoking in the early MH-SUD recovery environment. The website *Self Determination Theory: An Approach to Human Motivation and Personality* noted on the PCS validity level, "The alpha measure of internal consistency for the perceived competence items in these studies was above 0.80" (Self

Determination Theory-Health Care Questionnaires, 2015, April 8, para. 3). The tailored and researched portion of the study's survey provided two viewpoints of the data. The study's survey explores perceptions of smoking cessation and perceived competence levels of assessing willingness to quit smoking in early MH-SUD recovery.

Random colleagues at California State University, San Bernardino tested the survey for clarity and content comprehension. Once feedback from the testing phase was received, adjustments and corrections were made to the survey accordingly. Lastly, although other correlations can be made with the data that was collected, the survey served the primary purpose of measuring perceptions of behavioral health professionals.

### Procedures

The study's survey was disseminated electronically through Survey Monkey, which is an Internet based program designed to collect data through research instruments tools. Behavioral health professionals within the respective surrounding Southern California counties were contacted through email and phone calls regarding participating in the study. The people that participated in this study were chosen based on established knowledge that their agencies employ behavioral health professionals. It is important to note that the study's participating agencies required specialized approval for conducting research within their organization. Therefore, written permission for collecting data from the agency's behavioral health professionals was obtained

before the data collection process commenced. An email with instructions on how to take the survey was forwarded to the behavioral health professional or second party that disseminated the Survey Monkey link within the respective participating agencies. Lastly, the individuals who work within the behavioral health profession were asked to participate in the study through the informed consent phase of the survey.

### Protection of Human Subjects

There were no predictable risks as a result of the participant's contribution to this study. In addition, the participant's identity was kept anonymous. The survey participants were not required to use names or any other personal identification to participate in the survey. The participant's data was coded numerically and cannot be linked to the person taking the survey. The study's survey was associated with an informed consent (Appendix B) and debriefing statement (Appendix C) that ensured the participants that the survey was completely voluntary and they could have withdrawn from participating without consequence.

### Data Analysis

Nominal, ordinal and interval scale questions pertaining to independent and dependent variables referring to aspects of working in the capacity of a behavioral health professional and perceptions of smoking cessation have been assessed in Statistical Package for the Social Sciences (SPSS) by using

the appropriate statistical analysis function. Frequency tables are utilized to present the study's nominal and interval descriptive statistics. Bivariate analysis, including t-tests and ANOVA in SPSS are used to statistically present the main focus of the study on perceptions of smoking cessation in early MH-SUD recovery.

The study's nominal data set contributes to the data framework when comparing smokers, former smokers and gender to questions regarding smoking cessation appropriateness in the first six months of MH-SUD recovery. Data on perceptions of smoking cessation in MH-SUD recovery and highest level of education were assessed through statistical analysis to show inclusive results on overall perceptions of smoking cessation in early MH-SUD recovery. Interval data that was collected in the study's survey consisted of years of service as a behavioral health professional and age, which is displayed as a descriptive statistic. The study's data also creates an opportunity to assess confidence level ratings concerning assessing people's motivation to quit smoking by analyzing mean averages collected from the Perceived Competency Scale (PCS).

### Measurements

The survey participants were asked to provide answers to nine different smoking cessation related questions using an Likert scale that consisted of strongly agree, agree, neutral, disagree and strongly disagree answers. Survey participants were also asked to provide answers to four different

confidence-rating questions in assessing motivation to quit smoking. The confidence questions were presented using a rating type scale that consisted of scores from one through seven. In the PCS, one (1) represented not at all true, four (4) represented somewhat true and seven (7) represented not at all true. Survey participants were instructed to use a number between one and seven if their answers were in the middle of the available choices.

While participating in the study's survey, the 61 behavioral health professionals established their perceptions of smoking cessation in early MH-SUD recovery by answering various questions associated with the respective population and smoking. The participant's score is reported from the Likert Scale questions in the survey, which reflects their perceptions and thought process regarding smoking and early MH-SUD recovery. It is important to note that each available answer was assigned a number for SPSS coding and statistical analysis regarding mean averages. Please see Table 1 and Table 2 below for numeric assignment clarification conducive to the available answers.

Table 1. Likert Scale Numeric Assignment

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
(1)	(2)	(3)	(4)	(5)

Table 2. Confidence Scale Numeric Assignment

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Not at all true			Somewhat true			Very True

### Summary

The study's quantitative and cross-sectional design was introduced in this chapter. The data collection process was facilitated by a survey containing demographic and Likert scale type questions that assisted in collecting data from behavioral health professionals regarding their perceptions of smoking cessation services in early MH-SUD recovery. The sample population consisted of female and male study participants that were asked to participate in the brief survey. The survey was accessible through Survey Monkey that made access to data collection less challenging for the respective participants in the surrounding Southern California counties. Lastly, SPSS was used to analyze the data.

## CHAPTER FOUR

### RESULTS

#### Introduction

This chapter will present the statistical analysis results of the data presented by the respective behavioral health professionals of the study. Descriptive statistics highlights the demographical trends of the participants. Cross tabulations follows the demographics with statistics of key elements conducive to the research question: Per the perception of behavioral health professionals, is smoking cessation an appropriate intervention in the first six months of early MH-SUD recovery? Statistical analysis using t-tests and one-way ANOVA testing is also presented displaying the statistical difference of various bivariate correlations. Lastly, a short summary on the overall data will conclude this chapter.

#### Descriptive Statistics

The study's participants provided various elements of their societal status within the context of a behavioral health professional in the surrounding counties of Southern California. There were a total of 61 people that participated in the survey, however, some participants opted not to answer certain questions. Regarding highest level of education, people with master's and bachelor's degree represented the majority of the data's population. However, there were 2 people that reported having doctorate degrees. The

highest level of education data shows the expansive range of behavioral health professionals that participated in the study (see Table 3).

Table 3. Highest Level of Education

Education		Frequency	Valid Percent
Valid	Doctorate	2	3.3
	Masters Degree	22	36.1
	Bachelors Degree	18	29.5
	Associates Degree	4	6.6
	Certificate	7	11.5
	High School Diploma	4	6.6
	GED	2	3.3
	Other	2	3.3
	Total	61	100.0

The study's participants also reported their respective educational disciplines. It is important to note that this question had the "choose all that apply" option in the survey. According to the results of this data set, certified alcohol and drug counselors represented the majority of participants. People with psychology backgrounds represented another significant part of educational disciplines that included the Ph.D. and Psy.D. contributors to the data. There were marriage and family therapist, social workers and interns that contributed to the data set as well (see Table 4).



Table 4. Educational Disciplines

BASW	1	LMFT	4
Bachelors Degree in Psychology	18	Masters Degree in Psychology	11
Bachelors Degree in Sociology	5	Masters Degree in Sociology	2
Certified Alcohol and Drug Counselor	32	MBA	1
Certified Nursing Assistant	1	MFT	2
Certified Occupational Therapist Assistant	1	MSW	5
Educational Program Intern	5	Not Applicable	2
Intern Alcohol and Drug Counselor	1	Other	9
LCSW	1	Ph.D in Psychology	1
Licensed Vocational Nurse	1	Psy.D in Psychology	1

The study’s participants also provided years and months of service as a behavioral health professional. In summary, 56 people responded to “years” and 38 people responded to “months” as a behavioral health professional (see Table 5). The combined years of service assists in defining the behavioral health professional’s interactions and experiences with people in early MH-SUD recovery that may have included habitual cigarette smoking related issues.

Table 5. Years and Months as a Behavioral Health Professional

Years as a Professional	370
Months as a Professional	200
Total Years as a Professional	387

The study also provided an opportunity for the participants to identify as a current or former smoker. The data below (see Table 6) reveals that there were a significant amount of non-smokers that contributed to the study's data set that may include a positive bias towards supporting smoking cessation in early MH-SUD recovery. However, former smokers represented approximately 60% of the study's data set that may have a negative association to smoking cessation, as they understand the difficulty and resilience that is required to break the pattern of habitual cigarette smoking.

Table 6. Smokers and Former Smokers

		Smoker		
		Frequency	Percent	Valid Percent
Valid	Yes	6	9.8	10.9
	No	49	80.3	89.1
	Total	55	90.2	100.0
Missing	System	6	9.8	
Total		61	100.0	
Former Smoker				
		Frequency	Percent	Valid Percent
Valid	Yes	30	49.2	56.6
	No	23	37.7	43.4
	Total	53	86.9	100.0
Missing	System	8	13.1	
Total		61	100.0	

Ethnic and racial backgrounds were reported as separate categories within the following data sets (see Table 7 and Table 8). Approximately 68% of the participants that responded to the ethnicity question identified as non-Hispanic or Latino, Latina. Additionally, 60% of the participants identified as White, while there was an equal amount of people that reported Black or African American and Native American. A low percentage of people chose Other as race respectfully. Some participants opted not to provide answers to both the ethnic and race questions.

Table 7. Ethnic Background

		Ethnicity		
		Frequency	Percent	Valid Percent
Valid	Hispanic or Latino, Latina	17	27.9	32.1
	Non-Hispanic or Non-Latino, Latina	36	59.0	67.9
	Total	53	86.9	100.0
Missing	System	8	13.1	
Total		61	100.0	

Table 8. Race

		Race	
		Frequency	Percent
Valid	Black or African American	7	11.5
	Native American	7	11.5
	Other Race	9	14.8
	White	37	60.7

Gender and sexual orientation were also collected as separate variables, as each signify different societal affiliations. Females represented the majority of the participants at 62% while males represented a lower percentage. Gender creates an opportunity to analyze data from both the female and male perspective, as they may have different views towards

smoking cessation services in early MH-SUD recovery. Additionally, a low 20% of the participants identified as lesbian, gay, bi-sexual, trans-gender or questioning sexual orientation (LGBTQ).

Table 9. Gender and Sexual Orientation

		Gender		
		Frequency	Percent	Valid Percent
Valid	Female	38	62.3	62.3
	Male	16	26.2	26.2
	Declined to answer	7	11.5	11.5
	Total	61	100.0	100.0
Sexual Orientation (LGBTQ)				
		Frequency	Percent	Valid Percent
Valid	Yes	11	18.0	20.4
	No	43	70.5	79.6
	Total	54	88.5	100.0
Missing	System	7	11.5	
Total		61	100.0	

### Presentation of the Findings

#### Likert Scale Topics

The Likert scale research topics explored perceptions of smoking cessation appropriateness in early MH-SUD recovery (see Table 10). There was a high percentage rating regarding “smoking cessation should be recommended if a person is motivated” that revealed N = 33 (59%) strongly

agreed with the statement. The highest ratings that were consistent throughout this particular data set were in the “Agree” category. There were a high percentage of participants that agreed smoking cessation is accessible to people in recovery, smoking cessation should be encouraged and smoking cessation is an appropriate intervention in early MH-SUD recovery. It is important to note that there were “Disagree” and “Strongly Disagree” ratings that favored towards quitting smoking triggers psychiatric symptoms and causes stress and relapse. There were no data categories that significantly challenged the notion that smoking cessation is not an appropriate intervention in early MH-SUD recovery. Lastly, there were also participants that used the “Neutral” option in all of the questions that highlights they had no opinion or could not decide on the subject matters, especially regarding “it is recommended to quit smoking if a person is motivated” that presented a N = 23 (40%) ranking.

Table 10. Likert Scale Research Topics

	Strongly Agree N (%)	Agree N (%)	Neutral N (%)	Disagree N (%)	Strongly Disagree N (%)
Appropriate Intervention	15 (26%)	22 (39%)	13 (23%)	5 (9%)	2 (4%)
Should Encourage	17 (30%)	23 (40%)	8 (14%)	7 (12%)	2 (4%)
Triggers Symptoms	0	7 (12%)	21 (36%)	22 (38%)	8 (14%)
Stress and Relapse	1 (2%)	14 (24%)	22 (28%)	16 (28%)	5 (9%)
Recommended Quitting	9 (16%)	16 (28%)	23 (40%)	8 (14%)	1 (2%)
Smoking and Psych. Meds	3 (5%)	16 (28%)	15 (26%)	18 (32%)	5 (9%)
Smoking is a Social Norm	5 (9%)	26 (46%)	13 (23%)	10 (18%)	2 (4%)
Quit Smoking if Motivated	33 (59%)	19 (34%)	4 (7%)	0	0
Accessible Services	7 (13%)	26 (46%)	15 (27%)	8 (14%)	0

### Competence Scale Results

The Perceived Competency Scale (PCS) created an opportunity for the participating behavioral health professionals to self-evaluate their confidence in assessing people’s motivation to quit smoking in early MH-SUD recovery. There was an approximate mean average of “5.00” (sd = 1.72). The overall confidence level ranking in assessing people’s motivation to quit smoking in early MH-SUD recovery using the PCS scale was “5” meaning the behavioral health professionals feel “Somewhat Confident to Very Confident”. It is important to note that the conclusive averages were not challenged with low rankings such as “Not at all Confident”.

Table 11. Self Determination Scale (Averages)

Self Determination Theory Confidence Scale					
	N	Minimum	Maximum	Mean	Std. Deviation
Confident in Assessing	55	1	7	5.00	1.721
Capable of Assessing	55	1	7	4.84	1.642
Able to Assess	55	1	7	4.84	1.642
Able to Meet Challenge of Assessing	54	1	7	4.89	1.645
Valid N (listwise)	54				

### Smoker Perception Analysis

The answers provided by the behavioral health professionals regarding current smoker status were correlated with the following Likert scale questions for analysis: should encourage to quit smoking in early MH-SUD recovery, it is recommended to quit smoking in early MH-SUD recovery and smoking cessation is an appropriate intervention in early MH-SUD recovery. The current smoker sample for these questions consisted of 6 current smokers that remained consistent throughout all 3 questions. Approximately 7 people chose not to provide an answer to this series of questions.

Regarding “should encourage smoking cessation services”, the mean average for current smokers was 2.50 (sd = 1.04) and the mean average for non-smokers was 2.10 (sd = 1.05). The data for “recommended should quit smoking” provided a 2.50 (sd = 1.37) mean average for current smokers and a 2.59 (sd = .956) mean average for non-smokers. For the “smoking cessation



is an appropriate intervention” the mean average for current smokers was 2.67 (sd = 1.36) and the mean average for non-smokers was 2.17 (sd = .996). The reported averages are associated with the “Agree (2)” and “Neutral (3)” Likert scale ratings from the survey (see Table 12).

Table 12. Current Smoker Analysis

Current Smoker Status and Perceptions					
Smoker		N	Mean	Std. Deviation	Std. Error Mean
Professionals should Encourage Smoking Cessation	Yes	6	2.50	1.049	.428
	No	48	2.10	1.057	.153
Recommended should Quit Smoking	Yes	6	2.50	1.378	.563
	No	49	2.59	.956	.137
Smoking Cessation Appropriate Intervention	Yes	6	2.67	1.366	.558
	No	48	2.17	.996	.144

Independent t-tests were utilized to compare equality of means in this bivariate analysis regarding current smoker status and perceptions of smoking cessation related topics. For the question, “professionals should encourage smoking cessation” the t-test value was not significant ( $t = .866$  (52):  $p = .391$ ). There is no statistical difference between smokers and current smokers in their perception of encouraging smoking cessation in early MH-SUD recovery.

While analyzing the question, “it is recommended to quit smoking in early MH-SUD recovery” the t-test was also not significant ( $t = -.212$  (53):

$p = .833$ ). There is no statistical difference between smokers and non-smokers in their recommendation for people in early MH-SUD recovery to quit smoking.

Lastly, for the question “smoking cessation is an appropriate intervention in early MH-SUD recovery” the t-test was not significant ( $t = 1.11$  (52):  $p = .271$ ). There was no statistical difference between smokers and non-smokers in their perception that smoking cessation is an appropriate intervention in early MH-SUD recovery.

#### Former Smoker Perception Analysis

The participating behavioral health professional’s answers concerning former smoker status were also correlated with the following Likert scale questions: should encourage to quit smoking in early MH-SUD recovery, it is recommended to quit smoking in early MH-SUD recovery and smoking cessation is an appropriate intervention in early MH-SUD recovery. The data sample for this analysis consisted of 30 people who identified as former smokers and 23 people that identified as non-former smokers. A total of 8 people chose not to provide an answer to this series of questions. The former smoker and non-former smoker ratio is consistent throughout all 3 questions in the analysis.

The question “should encourage smoking cessation” produced a 2.03 ( $sd = 1.06$ ) mean average for former smokers and a 2.22 ( $sd = .998$ ) mean average for non-former smokers. Regarding “recommended to quit smoking”, the mean average for former smokers was 2.47 ( $sd = 1.04$ ) and the mean

average for non-former smokers was 2.65 (sd = .935). While analyzing “smoking cessation is an appropriate intervention” the mean average for former smokers was 2.03 (sd = .999) and the mean average for non-former smokers was 2.35 (sd = .935). The mean averages indicate they are closely related to the survey’s “Agree (2)” Likert scale rating (see Table 13).

Table 13. Former Smoker Analysis

Former Smoker Status and Perceptions					
Former Smoker		N	Mean	Std. Deviation	Std. Error Mean
Professionals should Encourage Smoking Cessation	Yes	30	2.03	1.066	.195
	No	23	2.22	.998	.208
Recommended should Quit Smoking	Yes	30	2.47	1.042	.190
	No	23	2.65	.935	.195
Smoking Cessation Appropriate Intervention	Yes	30	2.03	.999	.182
	No	23	2.35	.935	.195

Independent t-tests were calculated regarding former smoker status and behavioral health professional’s perceptions of issues that usually are associated with smoking cessation, similar to the current smoker analysis. The t-test for question, “professionals should encourage smoking cessation” was not significant ( $t = .640$  (52):  $p = .525$ ). There was no statistical difference between former smokers and non-former smokers and their perception of encouraging smoking cessation in early MH-SUD recovery.

For the question, “it is recommended to quit smoking in early MH-SUD recovery” the t-test was not significant ( $t = -.671$  (51):  $p = .505$ ). There was no statistical difference between former smokers and non-former smokers regarding their recommendation for people in early MH-SUD recovery to quit smoking.

Lastly, the t-test value for “smoking cessation is an appropriate intervention in early MH-SUD recovery” was not significant ( $t = 1.16$  (51):  $p = .248$ ). There was no statistical difference between former smokers and non-former smokers regarding their perception of smoking cessation being an appropriate intervention in early MH-SUD recovery.

#### Highest Education Analysis

One-way ANOVA testing was used to compare the behavioral health professional’s highest level of education with the following Likert scale questions: smoking cessation is an appropriate intervention in early MH-SUD recovery, behavioral health professionals should encourage smoking cessation in early MH-SUD recovery and it is recommended to quit smoking in early MH-SUD recovery. Of the 61 people that participated in the survey, the range of behavioral health professionals and highest level of education remained constant throughout all three questions.

There was no statistical difference between levels of education and “smoking cessation is an appropriate intervention” at the  $p < .05$  level between both variables [ $F(7, 49) = .645$ ,  $p = .717$ ]. The same is true for

“professionals should encourage smoking cessation” and levels of education, as there was no statistical difference at the  $p < .05$  level between both variables [ $F(7, 49) = .311, p = .946$ ]. Ultimately, there was also no statistical difference between “it is recommended that people in early MH-SUD recovery should quit smoking” and at the  $p < .05$  levels between both variables [ $F(7, 49) = .559, p = .785$ ] (see Table 14).

Table 14. ANOVA Highest Education Analysis

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
Smoking Cessation Appropriate Intervention	Between Groups	5.278	7	.754	.645	.717
	Within Groups	57.283	49	1.169		
	Total	62.561	56			
Professionals Should Encourage Smoking Cessation	Between Groups	2.931	7	.419	.311	.946
	Within Groups	65.946	49	1.346		
	Total	68.877	56			
Recommended Should Quit Smoking	Between Groups	3.984	7	.569	.559	.785
	Within Groups	49.910	49	1.019		
	Total	53.895	56			

### Gender and Smoking Related Issues

Similar to the current smoker and former smoker analysis, gender was correlated to the following Likert scale questions (see Table 14): quitting causes stress and substance use relapse, smoking is not recommended while

taking psychiatric medication and smoking is considered a social norm in early MH-SUD recovery. The gender analysis consisted of 38 participants identified as females and 16 participants identified as males. A total of 7 participants chose not to provide and answer to these series of questions. The female to male ratio remained constant throughout all three questions in this gender data set.

For the question “quitting smoking causes stress and substance use relapse”, the female mean average was 3.18 (sd = .926) and the male mean average was 3.38 (sd = .957). Next, regarding “smoking is not recommended while taking psychiatric medication”, the female mean average was 3.24 (sd = 1.07) and the male mean average was 2.81 (sd = 1.10). While analyzing “smoking is considered a social norm” the female mean average was 2.61 (sd = 1.02) and the male mean average was 2.63 (sd = 1.02). The mean averages rate closest to the “Agree (2)” and “Neutral (3)” Likert scale ratings.

Table 15. Gender and Smoking Analysis

Gender and Smoking Issues					
Gender		N	Mean	Std. Deviation	Std. Error Mean
Quitting Causes Stress and Substance Use Relapse	Female	38	3.18	.926	.150
	Male	16	3.38	.957	.239
Smoking Not Recommended While Taking Psych Meds	Female	38	3.24	1.076	.175
	Male	16	2.81	1.109	.277
Smoking Considered A Social Norm In Co-Occurring Recovery	Female	38	2.61	1.028	.167
	Male	16	2.63	1.025	.256

A series of independent t-tests were conducted to correlate gender and perceptions of stress, psychiatric medication, social norms and quitting smoking in early MH-SUD recovery. For the question “quitting smoking causes stress and substance use relapse in early MH-SUD recovery” the t-test was not significant ( $t = -.685 (52); p = .497$ ). There is no statistical difference between gender and perceptions of quitting smoking that may cause stress and leads to relapse in early MH-SUD recovery.

For the question, “it is not recommended to smoke and take psychiatric medication simultaneously” the t-test was not significant ( $t = 1.31 (52); p = .195$ ). The t-test results note there is no statistical difference between gender and perceptions of smoking and taking psychiatric medication in early MH-SUD recovery.

Lastly, for “smoking cessation is considered a social norm in early MH-SUD recovery” the t-test was also not significant ( $t = -.064$  (52):  $p = .949$ ). This data reveals there is no statistical difference between gender and perceptions that lean towards smoking cessation is a social norm in early MH-SUD recovery.

### Summary

The results of the study’s statistical analysis were reported in this section of the project. Demographics, perceptions of smoking cessation and confidence in assessing people’s motivation to quit smoking, per the behavioral health professional were reported in summaries and tables. Highest level of education and gender were correlated with various smoking cessation topics for t-test and ANOVA analysis. The descriptive statistics of Chapter 4 also highlighted the characteristics and years of experience of the participating behavioral health professionals. The statistical results of the data did not show any significant differences between the independent and dependent variables of the study that will be discussed in Chapter 5 *Discussion*. However, the statistical analysis associated with the survey’s questions did highlight that behavioral health professionals agree smoking cessation is an appropriate intervention in early MH-SUD recovery.



## CHAPTER FIVE

### DISCUSSION

#### Introduction

The results of the statistical analysis performed in this study warrant a data interpretation discussion. A discussion of demographics trends, the overall results of behavioral health professional's perceptions of smoking cessation and SPSS coding interpretation, conducive to the answers in the data analysis are presented in this chapter. Specific limitations that were identified throughout the study's developmental process will also be discussed. Lastly, a short discussion on recommendations for social work will conclude this chapter.

#### Discussion

The behavioral health professionals that participated in the study presented diverse demographic backgrounds. The educational backgrounds and years of experience of the study's participants highlighted the variety of possible results from the survey questions. The participant's status of being a current or former smoker and gender added possible biases to questions related to smoking cessation and confidence levels of assessing people's motivation to quit smoking in the first six months of early co-occurring disorder recovery.

Throughout the context of the study, information was presented on how behavioral health professionals may hesitate to implement smoking cessation in the early stages of mental health and substance use disorder (MH-SUD) recovery. There was also an opportunity to allow the participating behavioral health professionals to provide their perception of smoking cessation in early recovery, which assists in interpreting their insight and feedback to the study's research question.

The overall perceptions related to smoking cessation averaged approximately within the "Agree" and "Disagree" categories when prompted to provide an answer to positive and negative mindsets towards quitting smoking. It is important to note that several "Neutral" answers were also provided to both the positive and negative associations to smoking cessation as well. However, the valid statistical results did not strongly oppose smoking cessation services within the first six months of MH-SUD recovery. The study's t-tests and ANOVA exploration revealed that highest level of education, smoker status and gender did not have major influences on the results that are emphasized within the statistical analysis of the study. Given the responses that were associated to the research question, the study's data suggests that smoking cessation is an appropriate intervention in early MH-SUD recovery, per the perceptions of the participating behavioral health professionals.

The Perceived Competency Scale (PCS) analysis produced an overall average score of "5" that indicated the participating behavioral health

professionals were “Somewhat Confident to “Very Confident” in assessing people’s motivation to quit smoking in early MH-SUD recovery. The PCS “5” ranking can also imply that education and years of experience as a behavioral health professional contribute to their overall confidence level of working with people that show interest in quitting smoking in early MH-SUD recovery.

Some of the literature promoted smoking cessation services as an essential part of a person’s MH-SUD recovery process and has the potential to contribute to positive treatment outcomes (Baca & Yahne, 2008; Brunette et al., 2011; Hall & Prochaska, 2009;). According to Prochaska (2010), “The evidence indicates that individuals with psychiatric disorders can be aided in quitting smoking without threat to their mental health recovery” (p. 180). The data this study produced that supported smoking cessation as an appropriate intervention in early MH-SUD recovery complements Prochaska’s notion that individuals can quit smoking and remain stable during the process.

The participating behavioral health professional’s PCS ratings of assessing motivation to quit smoking concluded they are confident to talk to people about smoking cessation, regardless of preconceived notions that quitting smoking may hinder the process of early MH-SUD recovery. Prochaska (2010) notes, “Fear of decompensation should not be used as an excuse to overlook patients’ tobacco use in clinical practice” (p. 180). The data presented in the study’s Likert scale questions and PCS rankings note that the behavioral health professional’s confidence and positive outlook towards

quitting smoking warrants the need for further research on smoking cessation related issues as they relate to early mental health and substance use disorder recovery.

### Limitations

The demographics and perceptions of smoking cessation portion of the study's survey have not been tested for statistical validity that presents a major limitation of the study's data collection instrument tool. Another limitation that the study imposes is the time constraints allowed for the data collection process, which limited the number of surveys that were disseminated. Also, the study's data sets only represented a portion of an entire MH-SUD treatment episode that can continue for several more months, depending on the type of treatment modality and recovery environment. In addition, the survey does not mention the amount of cigarettes smoked during the early MH-SUD recovery time frame that can offer insight to perceptions of smoking cessation.

The survey also limits itself to cigarette smoking, mental health and substance use disorder issues, however, people in recovery face an array social and physical challenges that are not addressed in this study. It is important to note that data was compiled from a cross-sectional study, therefore, future data will not be collected from the participants. Although the answers to the Likert scale questions produced a sufficient amount of data to perform a statistical analysis, the "Neutral" responses presented a limit

towards creating stronger statistical differences within the variables. It remains unknown whether the participants that chose “Neutral” would have impacted the statistical testing, as their responses were not calculated in the “Strongly Agree, Agree, Disagree and Strongly Disagree” categories. Despite limitations and data collection challenges, the study’s quantitative, cross-sectional design demonstrated the level of significance of smoking cessation as an appropriate intervention in early MH-SUD recovery environments, per the perceptions of the participating behavioral health professionals.

#### Recommendations for Social Work Practice, Policy and Research

Associating smoking cessation and MH-SUD recovery orientated treatment services creates opportunities for enhanced social work practices, policy development and further research on the subject matter. Given the positive outlook towards quitting smoking in early recovery, the study’s data indicates a possibility of implementing smoking cessation as a standard treatment practice. Although quitting smoking remains an option for most people in early MH-SUD recovery, the results have supported the idea that smoking cessation is an appropriate invention and could be considered a step towards enhanced treatment practices within the respective population.

Enhanced practices regarding smoking cessation and early-MH-SUD also create an opportunity for policy development. While reflecting on the results that indicated behavioral health professionals support smoking

cessation in the early stage of MH-SUD recovery, policies can be developed pertaining to financial assistance and health care for treatment participants that show interest in quitting smoking. Policies can also be developed for smoke-free MH-SUD treatment centers that require agencies to promote smoking cessation as part of their treatment approach and curriculums. In addition to promoting smoke-free treatment centers, policies can be developed that will give agencies incentives through grants that will help with the cost of maintaining a smoke-free atmosphere for people in early MH-SUD recovery.

The data suggests that smoking cessation is an appropriate intervention and high confidence levels related to assessing motivation to quit smoking that was produced in this study warrant further research on how perceptions of smoking cessation can benefit the social work profession. The positive outlook towards smoking cessation creates research opportunities on quitting smoking during the middle and advanced stages of recovery. According to Brown and Flynn (2008) regarding posttreatment abstinence, ongoing sobriety presents social and emotional challenges that may lead to relapse. High confidence levels of assessing smoking cessation and supporting smoking cessation in early MH-SUD recovery can lead to research on factors that prevent the utilization of smoking cessation. Research from this study's data can also be used for need assessments regarding smoking cessation programs within the surrounding counties.

## Conclusions

Early mental health and substance use disorder recovery continue to present challenges to the respective treatment and recovery environments. The challenges and obstacles that co-occurring disorders present contribute to overall perceptions of smoking cessation and recovery orientated treatment services. Behavioral health professionals that work with the recovery orientated co-occurring disorder population have an opportunity to enhance treatment outcomes by implementing smoking cessation services as a standard method of treatment. The partnership between professionals and people in early recovery have the potential to change the traditional co-occurring disorder regimen of treatment, as literature in this study highlighted, that smoking cessation can contribute to positive treatment outcomes and better health benefits.

In conclusion, there is a positive outlook towards perceptions of smoking cessation that were not overwhelmingly challenged with opposed perceptions of the respective matter. The participating behavioral health professional's confidence level in assessing people's motivation to quit smoking noted that smoking cessation services has the potential to change the way early co-occurring disorder recovery is experienced, as the negative impact of habitual cigarette smoking will not be a factor during the process.

APPENDIX A  
QUESTIONNAIRE



## QUESTIONNAIRE

Please read the instructions thoroughly and mark the box next to the answer that best fits your response to the question.

1. What is your highest level of education?
  - Doctorate
  - Masters Degree
  - Bachelors Degree
  - Associates Degree
  - Certificate
  - High School Diploma
  - GED
  - Other
  
2. Mark all the educational disciplines that apply to you (please choose more than one if applicable).
  - BASW
  - Bachelors Degree in Psychology
  - Bachelors Degree in Sociology
  - Certified Alcohol and Drug Counselor
  - Certified Nursing Assistant
  - Certified Occupational Therapist Assistant
  - Educational Program Intern  
(Example: MFT Intern) specify\_\_\_\_\_
  - Intern Alcohol and Drug Counselor
  - LCSW
  - Licensed Vocational Nurse
  - LMFT
  - Masters Degree in Psychology
  - Masters Degree in Sociology
  - MBA
  - Medical Doctor
  - MFT
  - MPA
  - MSW
  - Not Applicable
  - Other specify\_\_\_\_\_
  - Ph.D.
  - Ph.D. in Psychology
  - Psy.D.
  - Psy.D. in Psychology
  - Psychiatrist
  - Registered Alcohol and Drug Counselor
  - Registered Nurse
  - Registered Occupational Therapist
  
3. How many years/months have you worked as a behavioral health professional?  
Specify years\_\_\_\_\_ Specify months\_\_\_\_\_

Behavioral Health Professional’s Perceptions of Smoking Cessation Services in the first six months of co-occurring mental health and substance use disorder recovery.

In the tables below the statements, please answer the following questions by using an “X” in the appropriate box starting with **Strongly Agree** with the statement through **Strongly Disagree** with the statement (please only choose one).

4. Smoking cessation services is an appropriate intervention during the first six months of co-occurring mental health and substance use disorder recovery.

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

5. Behavioral health professionals should encourage people to utilize smoking cessation services in their first six months of co-occurring mental health and substance use disorder recovery.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree

6. Quitting smoking in the first six months of co-occurring mental health and substance use disorder recovery triggers harmful psychiatric symptoms.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree

7. Quitting smoking in the first six months of co-occurring mental health and substance use disorder recovery causes unnecessary stress, which could lead to a substance use relapse.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree

8. It is recommended that people should quit smoking in the first six months of co-occurring mental health and substance use disorder recovery.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree

9. It is not recommended that people with a co-occurring mental health and substance use disorder smoke and take psychiatric medication simultaneously.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree

10. Smoking is considered a social norm in the co-occurring mental health and substance use disorder recovery environment.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree

11. Smoking cessation services should be recommended if the person is motivated to quit smoking in the first six months of co-occurring mental health and substance use disorder recovery.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree

12. Smoking cessation services are easily accessible to people in the co-occurring mental health and substance use disorder recovery environment.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree

**Assessing Motivation to Quit Smoking in the First Six Months of Co-occurring Disorder Recovery**

Using the Perceived Competency Scale in the **answer** section, please rate the following questions using the scale starting with 1 for **“Not at all True”** through 7 **“Very True”** according to your agreement with the statements provided. You may use the numbers in between 1, 4 and 7 if your answer falls within the labeled answers (please only choose one).

1	2	3	4	5	6	7
Not at all true			Somewhat true			Very True

13. I feel confident in assessing people’s motivation to quit smoking in the first six months of early co-occurring disorder recovery. **Answer** \_\_\_\_\_

1	2	3	4	5	6	7
Not at all true			Somewhat true			Very True

14. I am capable of assessing people’s motivation to quit smoking in the first six months of early co-occurring disorder recovery. **Answer** \_\_\_\_\_

1	2	3	4	5	6	7
Not at all true			Somewhat true			Very True

15. I am able to assess people's motivation to quit smoking in the first six months of early co-occurring disorder recovery. **Answer** \_\_\_\_\_

1	2	3	4	5	6	7
Not at all true			Somewhat true			Very True

16. I feel able to meet the challenge of assessing people's motivation to quit smoking in the first six months of early co-occurring disorder recovery.

**Answer** \_\_\_\_\_

Permission was granted to modify and utilize the Perceived Competency Scale from the Self Determination Theory, as the questionnaire is being used exclusively for scholarly research purposes.

#### Demographics

17. Do you smoke?

Yes  No

18. Are you are former smoker?

Yes  No

19. Ethnic Background (please only choose one)

- Hispanic or Latino, Latina
- Non-Hispanic or Non-Latino, Latina

20. Race (Please choose all the apply)

- Alaskan Native
- Asian
- Black or African American
- Native Indian
- Native Hawaiian
- Other Pacific Islander
- Other Race
- White

21. Age

Specify in years \_\_\_\_\_

22. Gender

- Female
- Male
- Other

23. Are you lesbian, gay, bisexual or transgender, or do you question your sexual orientation (LGBTQ)?  Yes  No

Developed by Paul Terrazas

APPENDIX B  
INFORMED CONSENT

## Informed Consent

The study that you are being requested to participate in is being conducted by Paul Terrazas, a Master of Social Work student fulfilling graduate school level requirements at California State University, San Bernardino.

The purpose of this study is to collect information from behavioral health professionals regarding perceptions of smoking cessation services in the first six months of co-occurring mental health and substance use disorder recovery. The results of this study will contribute additional knowledge to existing literature on smoking cessation in the co-occurring recovery environment. You will be asked to participate in a brief survey that will take 10 to 15 minutes to complete. There are no predictable risks as a result of your contribution to this study. Your identity will be anonymous. Participation in this study is completely voluntary and you are welcome to withdraw at any time without consequence. Questions regarding the participant's rights can be directed to staff supervising this project, Dr. Cory Dennis, Ph.D. (909-537-3501) at the California State University, San Bernardino School of Social Work.

The School of Social Work's Institutional Review Board (IRB) Sub-Committee at the California State University, San Bernardino, has approved this study. The results of this study will be made available at the John M. Pfau Library at the California State University, San Bernardino after December 2015.

By placing an "X" on the line below, I understand that I must be 18 years of age or older to participate in your study, have read and understand this informed consent and agree to participate in your study.

\_\_\_\_\_

"X" indicates agreement

\_\_\_\_\_

Date

APPENDIX C  
DEBRIEFING STATEMENT

Study of Behavioral Health Professional's Perceptions on Early  
Co-Occurring Disorder Recovery and Smoking  
Cessation Appropriateness

Debriefing Statement

Thank you for participating in this study. The survey you have just completed was designed to gather data on perceptions of early co-occurring disorder recovery and the utilization of smoking cessation services. Perceptions of smoking cessation that were identified through the survey will add knowledge to existing social work related studies on co-occurring disorders. The study's focus is to analyze smoking cessation services in early co-occurring recovery environments, per the perceptions of behavioral health professionals. This study is being conducted by Paul Terrazas, a Master of Social Work student at California State University, San Bernardino.

Again, thank you for your participation and contribution to the study. If you have any questions regarding the study or survey, please feel free to contact the supervising staff to the project, Dr. Cory Dennis, Ph.D. (909-537-3501) at the California State University, San Bernardino School of Social Work.

The results of this study will be made available at the John M. Pfau Library at the California State University, San Bernardino after December 2015.



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