## The University of San Francisco USF Scholarship: a digital repository @ Gleeson Library | Geschke Center

**Doctoral Dissertations** 

Theses, Dissertations, Capstones and Projects

Spring 5-17-2018

# A Program Evaluation of a Drug and Alcohol Family Treatment Program

Katrina Ramirez kdramirez3@gmail.com

Follow this and additional works at: https://repository.usfca.edu/diss

Part of the <u>Biological Psychology Commons</u>, <u>Clinical Psychology Commons</u>, <u>Cognitive</u> <u>Behavioral Therapy Commons</u>, <u>Community Health Commons</u>, <u>Health Psychology Commons</u>, <u>Psychiatric and Mental Health Commons</u>, <u>Social Psychology Commons</u>, <u>and the Substance Abuse</u> <u>and Addiction Commons</u>

#### **Recommended** Citation

Ramirez, Katrina, "A Program Evaluation of a Drug and Alcohol Family Treatment Program" (2018). *Doctoral Dissertations*. 438. https://repository.usfca.edu/diss/438

This Dissertation is brought to you for free and open access by the Theses, Dissertations, Capstones and Projects at USF Scholarship: a digital repository @ Gleeson Library | Geschke Center. It has been accepted for inclusion in Doctoral Dissertations by an authorized administrator of USF Scholarship: a digital repository @ Gleeson Library | Geschke Center. For more information, please contact repository@usfca.edu.

# A PROGRAM EVALUATION OF A DRUG AND ALCOHOL FAMILY TREATMENT PROGRAM

A Clinical Dissertation Presented to

The University of San Francisco

School of Nursing and Health Professions

Department of Integrated Healthcare

PsyD Program in Clinical Psychology

In Partial Fulfillment of the Requirements for the Degree

Doctor of Psychology

By

Katrina Diana Ramirez, M.S.

May 2018

#### PsyD Program Signature Page

This dissertation, written under the direction of the candidate's dissertation committee and approved by members of the committee, has been presented to and accepted by the faculty of the PsyD Program in Clinical Psychology in partial fulfillment of the requirements for the degree of Doctor of Psychology. The content and research methodologies presented in this work represent the work of the candidate alone.

Candidate Signature

fatrica Ramiro

7/25/18\_ Date

Candidate

Dissertation Committee Signatures

Chair

Committee Member

**Committee Member** 

7/25/18

Date

25-July-2018

Date 📊

July 25, 2018

Date

Administrative Signatures

melel ma **PsyD Program Director** 

Dean, School of Nursing and Health Professions

7/27/18

Date 7/27/18

Date

#### ABSTRACT

The current study is a program evaluation at John Muir Behavioral Health, Center for Recovery. The research determined the effectiveness of the program at Center for Recovery that is offered to patients that struggle with substance use disorder and their families. The purpose of this study is to assess patients' behavioral, cognitive and social/environmental factors as it relates to their commitment to sobriety and examine how the involvement of family members influences the patient's recovery process. I utilized a mixed methodology of quantitative and qualitative interviews of patients and family members. The findings suggest depressive symptoms were negatively correlated with commitment to sobriety. The correlation between higher rates of treatment helpfulness predicted lower levels of depression scores. As hypothesized, individuals with increased levels of social support reported lower levels of depression on the pre-test and post-test. Lastly, the correlation between higher rates of treatment helpfulness predicted lower levels of treatment helpfulness predicted lower levels of depression scores for patients at CFR.

The faculty listed below, appointed by the Dean of Nursing and Health Professions have examined a dissertation titled "A Program Evaluation of a Drug and Alcohol Family Treatment Program," presented by Katrina Diana Ramirez, candidate for the Doctor of Psychology degree, and certify that in their opinion it is worthy of acceptance.

Supervisory Committee

Brent "Rick" Ferm, Ph.D., Committee Chair School of Nursing and Health Professions

William Bosl, Ph.D. School of Nursing and Health Professions

> Lou Felipe, Ph.D. School of Education

#### ACKNOWLEDGMENTS

I would like to thank my wonderful parents, Diane and Cesar, for their unwavering amount of love and support over the years. Their constant words of encouragement and discussions about the future have been the catalyst to my growth and success. You are the reason I am here today. I would like to thank my two younger sisters, Tiana and Sabrina, for inspiring me to achieve all that I am capable of and always being there for me through life hardships. Thank you to all of my friends for always believing in me, even when I didn't believe in myself. I would also like to acknowledge the staff at the Center for Recovery (CFR) for sharing your passion in recovery with me and inspiring me to continue to obtain more skills in working with this amazing community. Further, thank you for allowing me to conduct the study at the CFR.

"You are asking yourself, as all of us must: 'Who am I?'... 'Where am I?'... 'Whence do I go?' The process of enlightenment is usually slow. But, in the end, our seeking always brings a finding. These great mysteries are, after all, enshrined in complete simplicity." -Bill W., Founder of A.A.

### Table of Contents

Abstract	ii
List of Illustrations	iii
Acknowledgements	iv
Chapter I	
Introduction	1
Chapter II	
Background	2
Factors that contribute to relapse	4
Interventions for Substance Use Disorder	8
Purpose of Study/Hypothesis	12
Chapter III	
Method	13
Setting	13
Quantitative Assessment	
Procedure	15
Participants	15
Measures	16
Data Analysis	19
Qualitative Assessment	
Procedure	20
Participants	20

	Measures		21			
	Data Analysis		21			
Chapte	er IV					
	Results - Quantitative	e Phase	22			
	Correlations		25			
	Changes from T1 to 7	Γ2	25			
	Table 1	27				
	Table 2	28				
	Predicting Change in	Outcome of Interest	29			
	Content Analysis		30			
	Results - Qualitative	Phase	37			
	Thematic Analysis					
Chapte	er V					
	Discussion		52			
	Limitations		58			
	Future Research		59			
Appendix A			63			
Appendix B			65			
Appendix C			67			
Appendix D			68			
Appen	dix E		69			
Appendix F						

Appendix G	72
References	74

#### CHAPTER I

#### INTRODUCTION

In the United States, 8 to 10% of people 12 years of age or older are addicted to alcohol or other drugs. The abuse of tobacco, alcohol, and illicit drugs in the United States is estimated more than \$700 billion annually in costs related to crime, lost work productivity, and health care (Longo, Volkow, Koob, & Mclellan, 2016). The financial costs do not include the amount of suffering and pain addiction produces for individuals and their loved ones. Addiction does not discriminate and impacts individuals of all socioeconomic statuses, races, ages and cultures. The following proposal is a program evaluation for a pre-existing drug and alcohol treatment program for patients and their family members. The study will be conducted at John Muir Behavioral Health, Center for Recovery in Concord, California.

I will be utilizing a mixed methodology of quantitative and qualitative interviews of patients and their family members. The research will seek to determine the effectiveness of the program at Center for Recovery that is offered for patients at different levels of recovery and their families. This study will explore the association of treatment satisfaction, mood, perceived social support, and motivation to remain sober. The purpose of this study is two-fold: (1) to assess patients' behavioral, cognitive and social/environmental factors as they relate to motivation to maintain sobriety as indicators of the effectiveness of the family treatment program at John Muir and (2) to assess how the involvement of family members impacts the recovery process.

#### CHAPTER II

#### BACKGROUND

In order to orient the reader to the validity of this proposal, various aspects of the national and local statistics of Substance Use Disorder (SUD), factors that contribute to relapse, types of SUD treatment and the proposing study of a program evaluation of a drug and alcohol family treatment program at John Muir Behavioral Health, Center for Recovery will be reviewed.

Substance misuse and dependency is a serious health issue in the United States that impacts millions of individuals and their families. From 2012-2013, an estimated 21.4% of Americans between 18-25 years of age reported using illicit drugs in the past month (Substance Abuse and Mental Health Services Administration [SAMHSA], 2013). Illicit drugs include: marijuana, cocaine, inhalants, hallucinogens, lysergic acid diethyl amide (LSD), Ecstasy (MDMA), heroine, and prescription drugs. Marijuana use has also increased dramatically amount young adults between the ages of 18-25, with reports of 31.78% using from 2012-2013 (SAMHSA). Further, it was reported that between 2012-2013, nearly 60% of Americans 18-25 reported using alcohol in the past month.

Not only are substance use disorders rampant among individuals between the ages of 18-25, but it is also an issue for individuals ages 26 years or older. From 2012-2013, it is estimated that 7.19% individuals reported using illicit drugs in the past month (SAMHSA, 2013). Further, 8.89% of individuals reported using marijuana in the past year. Between the years of 2012-2013, 55.73% of Americans reported using alcohol in the past month (SAMHSA, 2013).

Binge drinking rates are dramatically higher among people who are 18-25 years of age (38.70%) compared to those 26 years old or older (22.21%) (SAMHSA, 2013). SAMHSA (2013) states that 13.67% of individuals between the ages of 18-25 reported alcohol abuse or dependence in the past year, which is more than double in comparison to the age group of 26 and older at 5.95%. In 2014, the national survey on drug use and health indicated that 20,230 individuals over the age of 18 have had illicit drugs or alcohol dependence/abuse in the past year (SAMHSA, 2013). It is evident that individuals between the ages of 18-25 years have the highest rates of drug and/or alcohol abuse, which categorizes them as an at-risk group for drug and alcohol dependence.

In the state of California, 11.32% of individuals 18 years and older reported using illicit drugs in the past month and 24.12% of the overall population were between the aged 18-25 years old. Marijuana usage in the past year is the highest among those aged 18-25 year olds (33.69%) compared to those aged 12-17 years (15.03%) and 26+ years (10.91%). The California National Survey of Substance Abuse Treatment Services (N-SSATS) reported that 123,000 individuals were receiving treatment for substance abuse in the state of California (Substance Abuse and Mental Health Services Administration, 2010, 2010). Given the national and statewide statistics, it is also important to consider the prevalence of substance use locally in order to deliver effective treatment interventions.

Within Contra Costa County, it is estimated that 71,314 individuals 12 years and older have reported using illicit drugs in the 2007 data collection. Of this total amount, the largest subgroup was 54,377 (76.25%) individuals reported using marijuana. Alcohol is reported to be the second most common reason for admission into substance abuse treatment, with

methamphetamine abuse being the primary drug. In 2007, 28.8% of adults 18 years or older in Contra Costa County reported binge drinking the past year. Young adults aged 18-24 had a higher prevalence of binge drinking than adults aged 25-39. Adults aged 18–24 years (45.5%) and 25–39 years (39.1%) had a greater prevalence of binge drinking than the greater Bay Area overall (29.5%) (Contra Costa Health Services, n.d.).

Considering the high prevalence of substance use disorder (SUD), it is important to understand factors that contribute to relapse. Due to the nature of the disease with its pervasiveness and complexity, it remains to be a difficult disorder to treat. Unfortunately, SUD is associated with poorer treatment engagement and greater impairment if the person has psychiatric comorbidity in addition to SUD (Weinstock, Farney, Elrod, Henderson, & Weiss, 2016). Of the small percentage of the population that seek SUD treatment, relapse appears to be an ongoing issue that remains common and difficult to avoid. It is estimated that 60% of individuals relapse within one year of SUD treatment (Weinstock et al., 2016). These high rates of relapse leave researchers and clinicians questioning how to enhance SUD treatment to prevent against relapses.

#### **Factors that contribute to relapse**

Relapse is the overarching barrier in treatment for substance use disorders that often interferes with the outcome of effective treatment. Minimizing the risk of relapse can facilitate long-term treatment benefits. Hendershot, Witkiewitz, George and Marlatt (2011) define a relapse as "a setback that occurs during the behavior change process, such that progress toward the initiation or maintenance of a behavior change goal is interrupted by a reversion to the target behavior" (p.2). A drug relapse is also conceptualized as an ongoing *process* that occurs rather than one isolated event (Daley, 1987).

Most substance use treatment programs adhere to the bio-psycho-social-spiritual factors of treatment and can be conceptualized as factors that can contribute to relapse (Cheung & Lee, 2003; Daley, 1987). The biological factors consist of cravings, urges, and physiological withdrawal symptoms of the desired drug and/or alcohol resulting in the individual being at high risk for relapse (Daley, 1987).

Daley (1987) further explained that psychological factors contribute to relapse as well. Unresolved psychological conflicts that include intense mood swings, phobias, or psychological disorder are examples of psychological factors that may precipitate a relapse. Psychological factors include conscious and unconscious motivations and psychological patterns that one experiences (Daley, 1987; Giordano, Clarke, & Furter, 2014).

Affective factors include mood and emotions of the individual that can be either positive or negative. Researchers Hammerbacher and Lyvers (2006) found that 12.5% of their sample reported to relapse for a desire of a positive mood state, like 'wanting to party' and 'wanting to get high.' These internal factors include negative emotions as well, such as depression, anger, sadness, stress or guilt, adverse life events, and marital conflict (Giordano, Clarke, & Furter, 2014). Negative moods are more commonly associated with relapse than positive moods. The authors delineated that 61.5% of their sample reported to have relapsed due to negative mood states (e.g. depression and anxiety) (Daley, 1987; Hammerbacher & Lyvers,2006).

Behavioral factors related to relapse are the inability to manage stress, lack of problem solving skills, and inadequate social skills. These are factors that are commonly targeted in

treatment programs in order to aid patients in developing refusal skills, hobbies, and prosocial interaction skills (Daley, 1987; Giordano, Clarke, & Furter, 2014). Individuals who do not develop the appropriate skills are at a higher risk of relapsing in comparison to those who have the proper skill set. Patients who do not develop activities that occupy their time nor develop refusal skills are also at an increased risk for relapse (Daley).

Cognitive factors including an individual's expectations, beliefs, and attributions have been shown to impact a person's ability to maintain sobriety (Daley, 1987; Cheung & Lee, 2003). A common finding is that a person who is early in their sobriety believes they have the ability to engage in social situations where drugs and/or alcohol are present without relapsing, thus, putting themselves in risky situations for a potential relapse. Many treatment programs implement drinking refusal skills training in order to cognitively restructure how patients respond when exposed to alcohol/drugs in social situations (Witkiewitz, Villarroel, Hartzler, & Donovan, 2011).

Social and environmental factors that contribute to relapses include social and cultural influences, such as a person's peer group, specific locations of socializing (i.e. bars, restaurants that serve alcohol; Daley, 1987; Giordano, Clarke, & Furter, 2014). External factors such as interpersonal conflict, lifestyle, social pressures, and environmental stimuli also increase the likelihood of relapse. It is estimated that 17.3% reported to relapse from external pressures like peer pressure and dealing drugs (Hammerbacher & Lyvers, 2006). Family dysfunction and limited social support have also been implicated as a factor for relapse through several studies (Hser, Grella, Hsieh, Anglin, & Brown, 1999; Mankowski, Humphreys, & Moos, 2001; McMahon, 2001). Further, 8.7% of individuals reported to relapse due to social/family problems,

which was characterized as having 'little or no support' or 'social isolation' (Hammerbacher & Lyvers, 2006).

Spiritual factors contribute to relapse in that those with substance use disorder experience shame and guilt as a result of their substance use. This may be due to their perception that their use of substance is in conflict with spiritual and/or religious values (Daley, 1987). Deng, Li, Sringernyuang and Zhang (2007) suggest pre-existing religious values contribute to the stigmatization of drug users in the Dai community, similar to other communities. Societal perceptions of drug users and addicts lead to punitive attitudes and increase in the exposure to risks and limits access to protective factors (Deng, Li, Sringernyuang & Zhang). In other words, the stigma of addiction can prevent and discourage individuals of accessing the treatment they need, which can lead to further drug use and relapse.

Giordano and Cashwell (2014) conducted a study examining internal and external characteristics to provide more of a holistic perspective of what makes individuals at risk for developing substance use disorder (SUD). The researchers found a correlation between low levels of social interest (e.g. sense of welfare of others and belonging to a community) and low levels of substance use. The researchers suggest that addressing family issues during treatment is extremely important for individuals diagnosed with SUD (Giordano & Cashwell, 2014; Knight & Simpson, 1996; Spjeldnes, Jung, Maguire & Yamatani, 2012). Giordano and Cashwell further describe that strengthening family bonds are essential during the treatment of clients with SUD. This can be done with family members attending Al-anon, Nar-anon, Ala-teen and Family Anonymous meetings in order to foster a greater family attachment and by addressing the needs of the patients' family members (Giordano & Cashwell). It is important to tailor treatment for

each patient with SUD in order to address the individual and the specific contextual factors that increase the likelihood of them relapsing.

#### **Interventions for SUD**

Treatment centers across the country vary on how they implement various treatment components when targeting addiction, a complex and multi-faceted disorder. Monti, Abrams, Binkoff, Zwick, Liepan, Nirenberg, and Rohsenow (1990) suggested that treatment strategies should instill a variety of skills-training components, for instance: developing social skills to cope with social stressors and mood management skills to cope with negative mood states (e.g. anger, frustration, depression). Research suggests that skills training decreases the length and severity of drinking episodes, which enhance treatment programs' effectiveness for patients (Litt, Kadden, & Stephens, 2005; Weinstock, Farney, Elrod, Henderson, & Weiss, 2016; Witkiewitz, Villarroel, Hartzler, & Donovan, 2011).

Monti and colleagues (1990) conducted a study to evaluate three intervention groups: communication skills treatment (CST), skills training package with close family members or friend participating in the training (CSTF), or a cognitive behavioral mood management training (CBMMT). The researchers found that participants in a standard inpatient treatment program that received CST consumed significantly less alcohol during the six months following treatment than individuals that received CBMMT. The researchers hypothesized that this could be attributed to CST being more effective with training the participants in developing skills that are means for coping with high-risk interpersonal and intrapersonal situations. Thus, teaching participants how to seek support when they encounter emotional distress, how to resolve conflict amongst their peers, and coping with interpersonal negative states (e.g. boredom, frustration) can

reduce amounts of alcohol consumed if a relapse were to occur (Monti et al., 1990). Coping is recognized as a skill that includes cognitive and behavioral strategies designed to reduce or achieve fulfillment in a given situation (Marlatt & Gordon, 1985). Studies suggest that the most critical predictor of relapse is an individual's ability to utilize effective coping skills while dealing with high-risk situations. Coping strategies are often implemented in SUD treatment and have displayed efficacy across a wide range of clinical programs and settings (Bröning et al., 2012; Daley, 1987; Marlatt & Gordon, 1985).

In 1998, The Institute on Medicine issued a landmark report titled *Bridging the Gap* Between Research and Practice: Forging Partnership with Community Based Drug and Alcohol Treatment, which has significantly impacted substance use treatment (Garner, 2009). In order to reduce the disparity between research and practice, the field of substance use treatment has adopted evidence-based practice to improve the treatment and disseminate research findings at a community-based program. Researchers collected data from 1998-2008 to review the literature on the diffusion of evidence-based treatment (EBTs) within the United States at communitybased substance use treatment centers. The study classified EBT in two categories: pharmacological (e.g. naltrexone, buprenorphine) and psychosocial interventions (e.g. community reinforcement approach, contingency management) for the treatment of alcohol abuse or dependence. The literature indicates that the public generally has more positive attitudes and support for psychosocial EBTs relative to psychopharmacological EBTs. One study found that clinicians were more likely to adopt twelve-step facilitation, cognitive behavioral therapy, motivational interviewing and relapse therapy, relative to contingency management, behavioral couples therapy, or pharmacotherapies (Garner).

Hendershot, Witkiewitz, George and Marlatt (2011) believe the Relapse Prevention Model (RPM) to be a highly influential model that is included in the cognitive-behavioral treatment approaches. Relapse prevention is an intervention strategy aimed at reducing the likelihood and severity of relapse following reduction of problematic substance use behaviors. Contrary to most theoretical models that assume linear relationships amongst constructs and outcomes, the RPM is non-linear and complex. RPM is a dynamic model focused on high-risk situations and how they play a role in relapse, which is dependent on timing and severity. The relapse prevention approach is the second most commonly offered in treatment facilities used in California (96.4%), and substance abuse counseling being the most common (98.5%; California National Survey of Substance Abuse Treatment Services, 2010).

Matheson and Lukic (2011) reviewed the literature and described the importance of fully integrating family members in the treatment of SUD for adolescents and young adults. Studies have suggested that implementing family therapy while addressing substance use issues significantly reduces episodes of harmful drug abuse and improves the likelihood of long-term sobriety. The materials that are utilized for families and patients are based on findings that provide information on the impact drugs and alcohol have on one's behavior, development, and overall health. Additionally, introducing statistics and trends can be advantageous to represent the prevalence of SUD and to reduce the shame that the disorder can be associated with (Matheson & Lukic, 2011).

Further, experts have identified psychoeducation as an important component of substance use treatment (Matheson and Lukic, 2011). Psychoeducation regarding parent-child communication was found as being an important element when incorporating family members in

the patient's treatment. Psychoeducation is utilized in diverse treatment programs to provide proper knowledge about addiction to patients and family members. The rationale is that many patients and their families have limited knowledge of substance use disorders due to deeply ingrained values about self-determination and personal responsibility that frame drug use as a voluntary, hedonistic act (Longo, Volkow, Koob, & Mclellan, 2016). One form of psychoeducation includes information about the medical model, which is also known as brain disease model (BDM) of addiction.

As previously mentioned, our society holds values about drug use as being voluntary and based on self-determination (Longo, Volkow, Koob, & Mclellan, 2016). Consistent with this social-control theory has been used as a framework to investigate factors that contribute to addiction. Gottfredson and Hirschi suggest that a person with low self-control can exhibit poor impulse control and high risk-taking behavior (Gottfredson & Hirschi,1990; Longo, Volkow, Koob, & Mclellan, 2016; Schaefer, Vito, Marcum, Higgins, & Ricketts, 2015). From the review of the literature, the social-control theory supports the belief that lower self-control impacts binge drinking behaviors, drug use, cigarette smoking and imprudent behaviors (Arneklev, Grasmick, Tittle, and Bursik Jr., 1993; Gibson, Schreck, and Miller, 2004; Schaefer, Vito, Marcum, Higgins, & Ricketts).

Included in the substance use treatment curriculum is the biopsychosocial framework of addiction, which emphasizes biological component with categorizing substance use disorder (SUD) as a disease of the brain. Longo, Volkow, Koob, and Mclellan (2016) suggests that drinking and using drugs is a compulsive disorder and is directly tied to neurobiology. Recent neurobiological research challenges the ingrained views of drugs being used voluntarily and

based on one's self-determination and personal responsibility. Longo and colleagues (2016) argue that the underlying concept of addiction as a disease is rooted in Pavlovian learning or conditioning. Although there are countless studies that support this view, the belief that addiction is a brain disease remains controversial (Hall, Carter, & Forlini, 2015; Longo et al., 2016; Volkow & Koob, 2015).

There are many substance use disorder (SUD) treatment programs that exist nationally. Yet, little is known about how empirical findings are being translated into practice and whether the treatment programs are effective at preventing relapse. Evaluating existing SUD treatment programs is critical to understanding how research informs practice and enhances existing programs.

#### **Present Study/Hypothesis**

This study employs a mixed-methods approach to a program evaluation of the family treatment program that is offered at John Muir Hospital, Center for Recovery (CFR). The philosophy at CFR is based on the medical model for treatment, conceptualizing substance use disorder as a chronic and progressive disease. The program serves adults 18 and older that are suffering from chemical dependence. CFR assists patient's that have an addiction to alcohol, prescription medications, street drugs (e.g. methamphetamines, heroin, cocaine, and crack), and designer drugs (e.g. Ecstasy and GHB). The purpose of this study is two-fold: (1) this study will assess patients' treatment satisfaction, psychological, and social/environmental factors as they relate to motivation to maintain sobriety as indicators of the effectiveness of the family treatment intervention at John Muir Hospital, Center for Recovery and (2) assess how the involvement of family members impacts the recovery process. It is hypothesized that patients with active family

involvement and who perceive they have adequate social support will report increased mood and a higher level commitment to sobriety in comparison to their counterpart. Additionally, patients reporting higher levels of treatment helpfulness will have a greater commitment to their sobriety.

#### CHAPTER III

#### METHOD

#### Overview

This study will employ a mixed-method approach using quantitative and qualitative data to conduct an evaluation of a family substance abuse treatment program. This will be completed in partnership with a community partner to evaluate the program that is designed for patients and family members at Center for Recovery. Family members are defined as anyone who the patient perceives as their support system and participates in the family treatment program. Assessments and interviews will be conducted in a private room to ensure patient confidentiality and privacy. Institutional Review Board approval was obtained in order to interview family members and interact with current and former patients at Center for Recovery. Additionally, approval was obtained from John Muir Hospital's Institutional Review Board.

#### Setting

The philosophy at Center for Recovery is based on the medical model for treatment, conceptualizing substance use disorder as a chronic and progressive disease. The program serves adults 18 and older that are suffering from chemical dependence. CFR aids in assisting patients that have an addiction to alcohol, prescription medications, street drugs (e.g. methamphetamines, heroin, cocaine, and crack), and designer drugs (e.g. Ecstasy and GHB). This program provides

inpatient and detoxification services, outpatient programs as well as after care programs for young adults (ages 18-30), adults (ages 30+), parents and families.

The inpatient and outpatient program consists of a half-day or full-day (depending on the patient's level of need) of substance use interventions in a group setting. The program includes two different forms of groups: process (men/women's group, morning process group) and skills-based groups (relapse prevention group, negative consequences group, yoga, and expressive arts). In addition, the individual receives individual therapy once a week, family therapy, and daily homework assignments. The group facilitators utilize cognitive behavioral therapy (CBT) as the treatment approach with focus in development of healthy coping skills. Additionally, CFR uses the 12-step model in the program through patients acquiring a sponsor, receiving AA/NA books, assignments related to the 12-step model, and aftercare that is based on the 12-step model.

Center for Recovery (CFR) is unique in that it incorporates a family program, which fosters growth and recovery within the family system. The program's philosophy is rooted in the belief that chemical dependency is a *family disease* and the effects of dependency are farreaching in the family support system. That being said, family members receive much of the same education as the patients receive. CFR incorporates members of the patient's life that are significant to them and they do not have to be biological family members in the patient's recovery process. The CFR counselors strive for family involvement throughout each stage of the patient's recovery, whether it is through conference calls or family therapy. Additionally, each Saturday is dedicated to family treatment day where family members are highly encouraged to participate in a process group, educational lecture, experiential activity, and family therapy session. The family program is every Saturday for 6.5 hours and serves patients, family

members, and former patients of CFR. There are five key lectures that are related to Substance Use Disorder (SUD) for patients and family members that are presented each Saturday. Areas of common concern that are addressed in the lectures include: effective communication, relapse prevention, withdrawal symptoms, anger, and shame and guilt. Saturday attendance is optional for family members, but are highly encouraged for them, in order to gain a better understanding of the severity of SUD and how they could enhance their relationship with their family member.

#### **Quantitative Assessment**

#### Procedure

The quantitative aspect of the study assesses changes on the factors that have been shown to contribute to relapse. The variables examined in the current study are: treatment satisfaction, perceived social support, mood and motivation to maintain sobriety. I evaluated these variables of the participants to determine the effectiveness of the family program at Center for Recovery (CFR). In addition to the measures aforementioned, the survey included demographic and program satisfaction questions. These variables were evaluated through questionnaires that the participants completed individually. I conducted an initial assessment and follow-up assessment that occurred 3 months later that utilized the same measures.

#### **Participants**

I selected participants on a voluntary basis in order to participate in this study. The demographic information of individuals that receive services at Center for Recovery (CFR) are middle-to upper-class individuals that live in various counties in California. Patients attending CFR are predominately covered by private insurance, medical and medicare. Medicare typically

includes patients that are 25+ with a mental health diagnosis, chronic illness or co-morbid illnesses. Of this population, 15% of the individuals identify as racial minorities; 10% Latino and 5% African-American. The participants will be existing patients at CFR, which will include current patients and family members of the patient. The patients range in level of treatment, whether they are in the outpatient program or in aftercare and have already completed the 30-day inpatient/outpatient program.

Participants were recruited for the present study by attending aftercare, outpatient and more care groups at Center for Recovery (CFR). She provided the patients a brief introduction of herself and description of the dissertation topic and asked patients if they were interested in being involved in the study. The patients were informed that participating in the current study is completely voluntary and they have the choice to discontinue their involvement in the study at any time. I reviewed the patient rights, confidentiality and received written consent from each participant. I recruited participants by attending CFR aftercare and treatment groups and received a total of 88 participants that volunteered to complete the initial assessment.

Participants that were included in this study were over the age of 18 years; proficient in English; have a history of substance use; participate in the family treatment program; and have the ability to provide informed consent. Participants who were under the age of 18 years, do not speak English, and/or are not able to provide informed consent were excluded from this program evaluation.

#### Measures

The questionnaire contained demographic questions and measures of treatment satisfaction (Treatment Helpfulness Questionnaire; Chapman, Jamisonc, & Sanders, 1996),

perceived social support (Evaluation of Social Systems Scale; Aguilar-Raab, Grevenstein, & Schweitzer, 2015), mood (Patient Health Questionnaire-9; Kroenke, Spitzer, & Williams, 1999), and motivation to maintain sobriety (Commitment to Sobriety Scale; Klein, Slaymaker, & Kelly, 2011). Additionally, the questionnaire consisted of questions related to the duration of attending Center for Recovery (CFR), questions that identify family members that are involved in the treatment, commitment to treatment, questions about their support system outside of CFR, and intentions to maintain sobriety.

*Demographic* – This measure includes questions of age, gender, race/ethnicity, sexual orientation, educational attainment, monthly income, marital status, number of children, insurance status, employment status, and substance use history (previous programs attended/ number of relapses to date; refer to appendix A).

*Treatment Helpfulness Questionnaire.* This measure consists of 10-items that ask participants to rate the helpfulness of their current treatment. Participants rate the degree of helpfulness of each type of treatment that ranges from extremely harmful to extremely helpful with neutral (not helpful or harmful) falling in the middle. Responses are scored along a 10-point scale ranging from "–5" for *extremely harmful*, to "+5" for *extremely helpful. Neutral* yields a score of "0," Scores are calculated to the nearest tenth of a point. Inter-scorer reliability for 163 pairs of data points yielded a Pearson correlation of 0.98 and the Pearson test-retest reliability was even higher (r= 0.92) for the 75 pairs of data points when items were listed in reverse order on the second test. The Cronbach alpha for this measure in the study is .927 (Chapman, Jamisonc, & Sanders, 1996; refer to appendix B). *Evaluation of Social Systems Scale.* Participants rate level of social support and identify whether it is through partnership, family members, or work team. It includes questions that range from decision making to adapting to change. Questionnaire is a 9-item measure and utilizes a four-point rating scale format ranging from *very poor* "0" to *very good* "3". This measure showed the expected high and positive correlations with scales of life satisfaction, especially with the subscale of marriage/partnership. For the evaluation of the family context, similar moderate to very strong results indicated high construct validity. In the working team context slightly lower correlations were found. Still, all correlations pointed in the expected direction. The Cronbach alpha for this measure in the study is .922 (Aguilar-Raab, Grevenstein, & Schweitzer, 2015; refer to appendix C).

*Patient Health Questionnaire-9 (PHQ-9).* This 9-item measure briefly assesses the presence of depressive disorder diagnoses as well as grade depressive symptom severity. Each question is based from the DSM-IV depression criteria and is scored on a 4-point scale ranging from "0" not at all to "3" nearly every day. To determine the severity of depression, the PHQ-9 score can range from 0 to 27. Participants that score between 5-9 equates to minimal symptoms, 10-14 represents mild depression. The Cronbach's alpha value is .89. Construct validity was established by the strong association between PHQ-9 scores and functional status, disability days, and symptom-related difficulty and findings were generalizable to outpatients in a variety of clinical settings. The Cronbach alpha for this measure in the study is .863 (Kroenke, Spitzer, & Williams, 1999; refer to appendix D).

*Commitment to Sobriety Scale.* This measure is a 9-item questionnaire used to assess the construct of motivation to remain abstinent from drugs and/or alcohol. Questions such as "Staying sober is the most important thing in my life" are rated on a 6-point likert scale from *strongly disagree* "1" to *strongly agree* "6". The final question is rate 10-point scale from *not at all confident* "1" to *very confident* "10." Responses to all items are summed together to create a total score; higher scores represent a higher level of commitment to sobriety. Reliability and validity for this measure are not indicated; however, the measure has been utilized in several studies. The Cronbach alpha for this measure in the study is .962 (Kelly & Greene, 2014; Klein, Slaymaker, & Kelly, 2011; Schuman-Olivier, Greene, Bergman, & Kelly, 2014; refer to appendix E).

*Additional questions.* The survey also includes items related to if the participant is a new patient, the duration of attending Center for Recovery (CFR) and level of treatment (residential, inpatient, or outpatient). The patients provided two qualitative responses to questions that asses how the patient would feel if family members were involved in their treatment at CFR (refer to appendix F).

#### **Data Analysis**

In the current study, I used a sample of participants (n = 88) involved in a substance abuse treatment, as well as a subsample of these participants who completed a follow up assessment (n = 38) to assess participant's responses to substance abuse treatment. I examined the relevant associations among the variables of interest, social support levels, self-reported commitment to sobriety, self-reported perceptions of treatment effectiveness, and depressive symptoms. First, I examined the correlations among these variables at both the initial assessment

(time 1; T1), and follow-up assessment that occurred 3 months later (time 2; T2). Next, paired sample t-tests to determine if there was significant change in overall level for each of these variables from T1 to T2. Finally, I used multiple regression to examine what variables might predict changes in the participant's assessment of their commitment to sobriety and depressive symptoms from T1 to T2 as the main outcomes. All analyses were run in SPSS Version 24 using pairwise deletion for all models. Estimates included standardized regression weights to allow for comparison between differently scaled predictors.

#### **Qualitative Assessment**

#### Procedure

The qualitative assessment consisted of conducting semi-structured interviews with family members currently involved in the family treatment program at Center for Recovery. Individuals were selected to participate in the study through convenience sampling. Participants were informed of the current study by a staff member, and those that volunteered provided their name and contact information. The interview assessed the level of motivation to supporting the patient in their recovery, commitment to treatment and development of any additional support. I conducted four interviews that were approximately 30-45 minutes. Interviews were conducted in private rooms to ensure privacy, and saturation was met after 4 interviews were completed.

#### **Participants**

Only those described as family members participated in the qualitative portion of the study and patients were excluded from this phase. For the purposes of this project, a family member is defined as anyone who the patient perceives as their support system and participates in the family treatment program. To be included in this study, family members were at least 18

years of age, proficient in English, and able to provide informed consent. Participants under the age of 18 years, did not speak English, and/or not able to provide informed consent were excluded from this program evaluation.

#### Measures

*Demographics*. Family members completed the same demographic questionnaire as the patients. This measure included questions of age, gender, race/ethnicity, sexual orientation, educational attainment, monthly income, number living in household, marital status, number of children, insurance status, employment status, and substance use history (previous programs attended/number of relapses to date) (refer to appendix A).

*Interviews*. Semi-structured interviews were conducted to determine the family member's association to the patient, level of motivation to supporting the patient in their recovery, commitment to treatment and development of any additional support (refer to appendix G).

#### **Data Analysis**

Thematic analysis was used to disseminate the findings of the qualitative interviews with family members. I used the guide to thematic analysis by Braun and Clark (2006) as a foundation to their work (Braun & Clarke, 2006; Glaser & Strauss, 1967). The interviews were transcribed individually without traceable identification. I developed a transcription of the audio taped interviews and analyzed the four interviews separately until thematic saturation was accomplished. Of the transcription, I first utilized open coding to develop codes and general themes related to family member's involvement in the patient's treatment. Next, axial coding was used to group themes into coding categories consistent with the general themes that emerge (e.g.

shift in identity, belongingness). Finally, selective coding was used to determine what factors can impact the recovery process from a family member's perspective.

#### CHAPTER IV

#### **RESULTS – QUANTITATIVE PHASE**

Participants were recruited for the present study by attending aftercare, outpatient and more care groups at Center for Recovery (CFR). I provided the patients a brief introduction of myself and description of the dissertation topic and asked patients if they were interested in being involved in the study. The patients were informed that participating in the current study is completely voluntary and they have the choice to discontinue their involvement in the study at any time. I reviewed the patient rights, confidentiality and received written consent from each participant. I recruited participants by attending CFR aftercare and treatment groups and received a total of 88 participants that volunteered to complete the initial assessment.

Of the 88 participants (n = 88), there were a total of 52 males (59%) and 36 females (41%) involved in the present study. The marital status of the sample included: 31 participants (35.2%) who identified as single, 29 participants (33%) identified as married, 20 participants (22.7%) identified as divorced, 4 participants (4.5%) identified as widows and 4 participants (4.5%) identified as separated. Of this sample, 66 participants (75%) were involved in outpatient aftercare at Center for Recovery (CFR), 21 participants (23.9%) were involved in outpatient day treatment and 1 participant (1.1%) was in inpatient. Thirty-five participants (39.8%) reported to be a new patients to CFR and 53 participants (60.2%) were existing patients of CFR.

The majority of the sample fell between the ages of 41-64 with a total of 42 participants (47.7%), with 20 participants (22.7%) aged 26-40, 17 participants (19.3%) aged 65 and older,

and 9 participants (10.2%) falling between the ages of 18 through 25. The sample included 79 participants (89.8%) who identified as heterosexual, 4 participants (4.5%) who identified as bisexual, 3 participants (3.4%) who identified as homosexual and 2 participants (2.3%) who identified as other. The majority of the sample (n=68, 77.3%) racially identified as white, with African American and biracial participants each at 5 participants (5.7%); 4 participants (4.5%) were Latino; 3 participants (3.4%) identified as Asian, and the other 3 participants (3.4%) listed their ethnicity as "other."

The participants that answered that they are not a new patient at Center for Recovery (CFR) provided the length of time they have been affiliated to the program. Of the sample, participants reported being affiliated with CFR for 60+ months for 4 participants, 60 months for 1 participant. 48 months for 3 participants, 36 months for 6 participants, 30 months for 2 participants, 24 months for 4 participants, 18 months for 2 participants, 12 months for 5 participants, between 6-12 months for 11 participants, less than 6 months with 14 participants, 1 month for 3 participants and less than one more for 7 participants.

The sample involved 52 participants (59.1%) earning a college degree or higher, 23 participants (26.1%) who complete some college, 7 participants (8%) with post-high school technical training, 5 participants (5.7%) with a high school degree/GED, and 1 participant (1.1%) with high school or lower. The monthly income of the sample are as follows: 45 participants (51.5%) earn more than \$3,001, 17 participants (19.3%) rather not say, 14 participants (15.9%) earn less than \$2,000 per month and 12 participants (13.6%) earn between \$2,001-\$3,000 per month. There were 33 participants (37.5%) with no kids, 27 participants (30.7%) with 2 children,

13 participants (14.8%) with 3 children, 9 participants (10.2%) with 1 child and 6 participants (6.8%) with 4+ kids.

The sample had diverse responses related to the sample desired drug of choice (DOC) and it is important to consider the participants selected one or more drug(s) if necessary for their responses. Sixty-four participants identified alcohol as being their DOC, 13 participants reported their DOC is weed, 11 participants identified opiates as their DOC, 8 participants reported their DOC is cocaine, 5 participants selected meth, 5 participants indicated heroin as their DOC and 3 participants identified benzodiazepines as being their DOC. Xanax, stimulants and "everything" was selected by 2 participants each. Lastly, 1 participant identified hypnotics as their DOC.

Participants in this study were asked specific questions related to their history of substance abuse, such as how many times they have relapsed throughout their lifetime, how many times they have completed substance abuse treatment and family participation in their substance use treatment. Of the sample, 37 participants (42%) reported they have never relapsed, 22 participants (25%) reported to have 5+ relapses, 10 participants (11.4%) reported they have had one relapse, 8 participants (9.1%) reported to have three relapses and 7 participants (8%) reported to have two relapses. Forty participants (45.5%) reported that Center for Recovery (CFR) was their first attempt at receiving substance use treatment, 20 participants (22.7%) reported that that they have been involved in two treatment programs, 12 participants (13.6%) reported to be involved in three treatment programs, 10 participants (11.4%) reported they have been involved in 5+ programs and 3 participants (3.4%) have been involved in four different treatment programs. Of this sample, 31 participants (35.2%) reported that their family does not

participants in the Saturday family program. Twenty-six participants (29.5%) reported that their family participates in other programs that support their recovery that excludes CFR. Of the sample, 61 participants (69.3%) reported that their family does not participate in other programs that support their recovery.

#### Correlations

I first examined the simple correlations among the T1 and T2 variables of interest. As expected, all the T1 variables were significantly and moderately to very strongly correlated with their corresponding scores at T2, .38 < rs < .73. In addition, social support and depressive symptoms were moderately to strongly negatively correlated at both T1 and T2, (r = -.40, p < . 001; r = -.61, p < .001). Similarly, depressive symptoms were moderately negatively correlated with commitment to sobriety at both T1 and T2, (r = -.26, p = .014), and strongly at T2, (r = -.58, p < .001). In addition, participants' assessment of treatment helpfulness at T1 did not correlate with any other variables of interest at T1, but moderately correlated at T2 with commitment to sobriety, (r = .34, p = .035), social support, (r = .33, p = .039). The full correlations among the variables of interest are presented in Table 1.

#### Change from T1 to T2

Next, the paired sample T-tests were conducted to examine changes from T1 to T2 for specific variables of interest. When accounting for the autocorrelation between the assessment at T1 and T2, there were no significant changes in participants' scores across any of the four variables of interest—commitment to sobriety, (t = -0.03, df = 36, p = .978); depressive symptoms, (t = 1.94, df = 38, p = .060); perception of treatment helpfulness, (t = -1.08, df = 38, p = .286), social support, (t = 0.58, df = 38, p = .564)—though depressive symptoms approached

a significant decline. These results suggest that the participants' depressive symptoms, commitment to sobriety, social support, and perception of treatment effectiveness did not change significantly from T1 to T2. Table 1 outlines the descriptive statistics for the variables of interest in the study at the initial (T1) and follow-up (T2) assessment.

Tal	ble	1.

Descriptive Statistics and Correlation Matrix for Primary Study Variables.

1		5	~	~				
Variables	1	2	3	4	5	6	7	8
T1 Treatment helpfulness (1)	1.00							
T1 Commitment to sobriety (2)	0.06	1.00						
T1 Depressive symptoms (3)	-0.11	-0.26*	1.00					
T1 Social support (4)	-0.12	0.20	-0.40*	1.00				
T2 Treatment helpfulness (5)	0.50*	0.14	-0.19	0.34*	1.00			
T2 Commitment to sobriety (6)	0.21	0.38	-0.13	0.30	0.34*	1.00		
T2 Depressive symptoms (7)	-0.32*	-0.10	0.58*	-0.66*	-0.30	-0.58*	1.00	
T2 Social support (8)	0.14	-0.13	-0.51*	0.73*	0.33*	0.23	-0.61*	1.00
Mean	2.69	5.53	6.17	2.27	2.91	5.62	4.94	2.28
SD	1.61	1.43	5.27	0.58	1.36	0.72	4.66	0.55

All variables are means with the exception of depressive symptoms, which is a sum score. T1 =Time 1, T2 = time 2. \* *p* < .05.

Model Results for the Regression Models				
Outcome: T2 Commitment to Sobriety	<i>B</i> 95% CI		β	
T1 Treatment helpfulness	0.13	2	0.29	
T1 Depressive symptoms	0.03 ,		0.22	
T1 Social support	0.58*	[0.08,	0.43*	
T1 Commitment to sobriety		[0.05,	0.42**	
Outcome: T2 Depressive Symptoms	В	95% CI	β	
T1 Treatment helpfulness		2	-0.32**	
T1 Commitment to sobriety		,	-0.52**	
T1 Social support	-0.21	,	-0.09	
T1 Depressive symptoms	0.24	,	0.26	

Table 2.	
Model Results for the Regression Models	

*Note:* 95% CI = 95% confidence interval. T1 = Time 1, T2 = time 2. \* *p* < .05. \*\* *p* < .01.

# **Predicting Change in Outcomes of Interest**

Finally, I used multiple regression to assess what variables might predict who responded more or less positively to the treatment over time in terms of their commitment to sobriety and depressive symptoms from T1 to T2. The full results for the two regression models are presented in Table 2. In terms of commitment to sobriety, depressive symptoms did not predict T2 commitment, (B = 0.03,  $\beta = 0.22$ , p = .260). Higher perceptions of treatment helpfulness approached significance in predicting greater commitment, (B = 0.13,  $\beta = 0.29$ , p = .071), whereas more social support significantly predicted greater commitment to sobriety, (B = 0.58,  $\beta = 0.43$ , p = .024). All these effects were independent of participants' T1 commitment to sobriety, which was included as a covariate in the model. These results suggest that people who have higher social support also were more committed to their sobriety.

Next, I examined the model with depressive symptoms at T2 as the main outcome of interest. Commitment to sobriety did not predict later depressive symptoms, (B = -0.21,  $\beta = -0.09$ , p = .417). In contrast, greater social support levels significantly predicted lower depressive symptoms, (B = -4.37,  $\beta = -0.52$ , p < .001). Similarly, higher ratings of treatment helpfulness predicted lower levels of depressive symptoms, (B = -0.90,  $\beta = -0.32$ , p = .006). All these effects were independent of participants' T1 depressive symptoms, which was included as a covariate in the model. These results suggest that people who have more social support and have a higher assessment of treatment helpfulness have lower depressive symptoms over the course of treatment.

## **Content Analysis**

A content analysis was used to analyze the qualitative portion of the answers that were provided by the patient. The two questions were included in the questionnaire packet given to the patients in the initial assessment and 3-month follow up assessment. Patients were asked the following two questions: "*How does it feel to have your family involved in your substance use treatment*?" and "*If they are not currently involved in your treatment, would you like them to be involved*? Why or why not?"

The patients' responses for the question: "*How does it feel to have your family involved in your substance use treatment*?" had two overarching themes. The majority of patients identified positive qualities as to why they enjoy or would enjoy having family involved in their substance abuse treatment.

That majority of patients identified that they would like their family members involved in their treatment in order for them to have a greater level of understanding of addiction and the recovery process. Understanding addiction and the recovery process was an overarching theme, specifically family members understanding the disease model of addiction.

"It is important to have the support from my family. They make adjustments to allow time for recovery - meetings, sponsor contact, etc."

"I would like my daughters to go to a few Ala-non meetings, help them understand that it is not just will power."

Sub-themes that were identified were: removal of blame on the patient, increasing honesty and family member's acceptance of the patient for their identity as an individual suffering from addiction.

"It really helped when we are all educated about the physical process of addiction. Took a lot the 'hurt' out of the situation."

"Very helpful to know I have people who love me and my decisions and my journey."

Another theme that was developed was the patient having an increase in positive feelings if their family member was involved in their treatment. Concepts, such as feeling loved by their family, making their family members proud of them and the patient feeling proud of themselves were all sub-items identified.

"When my family support me I feel that they accept me the way I am and acknowledge my disease. I feel encouraged and proud to be sober."

"My son came to one session and is very proud of me. That makes me happy."

"[Family participation is] extremely important knowing I have the support of my family. It has brought us closer together."

The final theme that was developed was more openness within the patient and family member relationship. Openness was comprised of two sub-themes: more encouragement and the opportunity to help other family member's with addiction issues

of their own or any other issues that would involve recovery (e.g. co-dependency issues, addiction, depression and other mental health concerns).

"Everyone is involved except for my father who is an alcoholic still in his disease. I would love if he were involved, maybe one day."

Contrarily, a subset of patients reported that they did not want family involvement in their treatment. This finding resulted in two themes; the first theme being the lack of understanding family members have around with addiction and addiction treatment. Several participants identified that family members do not understand and/or agree with the disease model of drug and alcohol addiction.

"Not a fan of family involvement in recovery. They don't understand why I don't just stop using."

Second, several patients did not want family involvement because they experienced their involvement as intrusive. Addiction and addiction treatment can be a very private topic that involves vulnerability and includes some of the darkest points in a person's life (Stringer and Baker, 2018). Involvement may not be appropriate for some family members due to the adversarial nature of that relationship and level of comfortability of the patient with certain family members.

"It feels invasive a bit. Like this is a private thing that I am working on."

An additional theme identified was barriers as to why family members are not involved with the patient's treatment was the distance of their loved ones. Patients identified that their family does not attend Center for Recovery (CFR) programming due to it not being feasible due to living out of state or out of the area from CFR.

"My family is very supportive and amazing. It is a little hard though because my mom lives in Oregon still and my sister in Colorado and my dad is MIA."

"There are more family members I would like involved, but they live on the East Coast."

The patient responses for the question: "If they are not currently involved in your treatment, would you like them to be involved? Why or why not?" Five themes were developed for patients that would like their family members involved in their treatment at Center for Recovery (CFR). Consistent with previous patient responses from the first question, patients would like their family member to understand addiction.

"I would like them to be involved so they can better understand what its like to live as an addict and to learn and understand the behavior and damage that entails."

Sub-themes that were found under the broad theme of understanding are: families' understanding their role in the patient's recovery, the family member understanding their own recovery process and lack of understanding resulting in ending the friendship or relationship.

"It would be nice if my husband were more supportive of my efforts and openminded to recovery education. I cannot imagine him being involved in my treatment. We are in the process of planning for divorce. I hope my children will recognize the benefits of my recovery over time and become part of my program."

The second theme established was the family member having to be motivated to attend the patient's treatment and not involved only due to obligation. A sub-theme to the family member's motivation to attending treatment is the openness to overcome fears with participating that are rooted from assumptions, biases and inaccurate information about addiction or addiction treatment.

"I wish that my family had the desire to be a part -- active part-- of my treatment."

"I only want them to be involved if they want to. I'd never want to force somebody to go to groups if it is not what they want."

The third theme is open-communication between the patient and family member participating in treatment. The patients identified that they would be more open about their disease with their family if they were actively participating in their treatment.

"I would like them to make me feel that I can talk to them about my disease. I feel alone when they're just passive, but judge me if I drink."

"A relief. All that honestly after so much lying."

"...I've kept it (use and recovery) from them. It would feel liberating to tell them, but I am waiting until I'm stably sober." The fourth theme as to why patients would want their family members involved in their substance abuse treatment is for family members to understand their role in the patient's recovery and addressing their own issues.

"It's wonderful to have such great support and understanding. Family counseling at CFR helps tremendously. My wife is processing her own behavior changes and also the 12 steps."

"There are benefits for individual growth. I feel they are enormous and would result in harmony for all."

The final theme is for the patients to prove to their family member their commitment to sobriety of abstaining from drugs or alcohol.

"It will just take time so they see I really want to stay clean and sober and really mean it."

The majority of patients involved in the sample responded positively to family members being involved in their treatment; however, there were also patients that did not want their family members to participate. There were three themes identified: lack of willingness, out-group member bias and lack of trust.

The first theme identified was not wanting their family involved due to their loved ones not being willing or openness to attending their treatment or learning about the disease model of addiction. "No, not the way they are because they are not open-minded and willing -- they don't have a 12 step program and they don't have a higher power. They have no idea what it means to surrender. They don't support the program I'm in. They use and are unwilling."

The second theme was the patients assuming their family member would not understand addiction or their recovery process due to their family member not being an addict themselves. People that are not struggling with addiction themselves are often viewed as out-group members or "normies."

"No, I don't find it to be necessary. They don't suffer from what I suffer from. They don't understand and probably won't."

The last theme identified as to why patients do not want their family member's involved in their treatment is due to not trusting them.

"My extended family - parents, brother, sisters, have no clue I am in recovery. It would be nice to have their support, but I don't trust them enough to confide in them."

"No, lack of trust, me to them. Lack of willingness and to request their help on my part."

Consistent with previous findings (i.e. Kulesza, Larimer & Rao, 2013; Stringer & Baker, 2018), addiction treatment can be perceived as a very personal and private journey of recovery that includes various levels of severity and life-altering experiences. That

being said, the patient would have to feel they can trust that person without the fear of judgement or rejection.

## QUALITATIVE PHASE

Participants for the present study were recruited by Center for Recovery (CFR) staff making an announcement to family members during a Saturday group offered to family members only. The group facilitator provided a description of the dissertation topic, its voluntary nature and what participation involves. The participants provided their name and contact information in order for me to contact them to schedule the interview. The family members' names and contact information were all destroyed to ensure participant confidentiality and were only utilized for the purpose of the study. I randomly selected the family members listed on the sign-up sheet and contacted them to schedule the interview. The volunteers were informed that participating in the study is completely voluntary and they have the choice to discontinue their involvement in the study at any time. Prior to conducting the interviews, I reviewed the patient rights, confidentiality and received written consent from each participant. Saturation was met after completing a total of 4 interviews.

Of this sample that was collected for the qualitative phase of the study, 2 participants were parents and 2 were partners to the individual receiving substance abuse treatment at Center for Recovery (CFR). Among the family members, there were a total of 2 males and 2 females involved in the present study. The length of time the family members have been involved at CFR ranged from 5 months to 7 years. Three of the four participants identified being in the age range of 41-64, while the other participant reported to be 65+ years of age. One participant reported they are divorced, while the other 3 participants reported they are married. Of this sample, all

participants identified as being heterosexual. The majority of the sample racially identified as being white, while 1 participant reported being biracial. All participants in the sample reported having some college education or higher degree, as well as never being involved in drug/alcohol treatment for themselves. The monthly income of this sample consisted of 3 participants making more than \$3,001 per month while 1 participant reported to Thematic Analysis: make between \$2,001-\$3,000 monthly. Of this sample, 2 participants reported to have 1 child, 1 participant identified as having 2 children and the last participant reported to have 4+ children.

### **Thematic Analysis**

As previously mentioned, I utilized a thematic analysis in order to synthesize the data received from family members involved at Center for Recovery. I utilized the guide to thematic analysis by Braun and Clark (2006) as a foundation to their work (Braun & Clarke, 2006; Glaser & Strauss, 1967). I conducted 30-45 minute interviews with family members that volunteered to participate in the current study. I transcribed, coded and developed themes across the four interviews that were conducted.

The analysis determined the following concepts as themes related to the benefits of attending Center for Recovery (CFR) groups: consistency, reliability, belonging, relating to others and exposure to upcoming hurdles.

Consistency provided family members continuity of care each week in regards to the facilitator, style and day/time. Family members found comfort in knowing that groups are unlimited, always available to them whether the patient is involved with Center for Recovery (CFR) or not and can be a lifelong support to them. These elements of the groups at CFR contribute to the *reliability*, which was an identified sub-theme.

"I like know that this [CFR] is here. So that if I do have an issue, I know where I can go."

"It's interesting that I am still here and I am very grateful for the fact that I can still come although my qualifier is not, that is a *huge* benefit."

Secondly, family members feel a sense of belonging when engaging with their peers that share similar feelings and experiences. This idea of relating to others is a significant sub-theme that was identified by family members. Family members described relating to others as a way of reducing isolation due to knowing there are others that share similar stories, feelings (e.g. pain, anger, resentment) and experiences they have. Additionally, family members value the bonds that are established through CFR and community that is formed through attending groups on a regular basis. Relationships between group members are said to become stronger with involvement in groups.

"Like I feel like definitely a sense of family here. Like I feel like I belong here, I don't feel like I am with a bunch of strangers and I think a lot of that is there are a lot of people, like regular families here."

"My theory of why it works, there definitely might be more to it, but it's definitely the community experience -- Addiction is a disease that attacks social organization or social connection and therefore the cure must be through social connection to whatever degree."

"I just felt that I didn't have anyone to go to or like some book I could read and figure out what I should do. And so that's why I keep my motivation to come here is to like be around people who notice like - gone through it going through it, whatever.""

"I love the fact that I could sit in meetings with people that if we were to talk about any other subject, we would have nothing in common. And yet, their humanity when they talk about -- what they learned and how they have had to deal with this, I cannot tell you how many times it brings tears to my eyes. Not many places you can get that, that is a rare commodity!"

Lastly, family members are exposed to future barriers and/or obstacles that they have not experienced yet through learning from their peers.

"There are a lot of people talking about things that are way down the road, talking about things like a relapse and that's something that I have not experienced yet, or just all kinds of things. So, I find it just very helpful, more so than any books I have read or anything else."

In addition to the benefits that Center for Recovery (CFR) offers patients and family members, there are aspects of the program that could be improved that have been identified by family members as well. Family members identified the following themes: communication and organization of the program and resource education.

Lack of communication amongst the organization appeared to be an area for improvement for Center for Recovery. Family members made suggestion of ways of enhancing the communication between staff and consumers.

"I think the whole admission process could be a lot better for family members. Having it more organized too, like I feel like the program is a little disorganized in terms of like when that Wednesday family meeting moved to Tuesdays, it was completely chaotic." "Maybe there needs to be like a better -- like an iPhone app or something for the staff and everyone at the front desk that kind of say what the schedule is. So, I think that there could be just some more organization or technology. Like on the website it's not like you can go on the website and find anything."

Another area of improvement could be around educating the family members early on in the process of the services and resources that are available to them through CFR. It was reported that most of the focus is on communicating to the patient the groups and services offered; however, it would also be advantageous to advertise the family and parent services available to family members as well.

"The support is there, it is just not clear -- not clear that it is and where it is. It is really great once you figure it out and learn the ropes or whatever."

"I think kind of the marketing side of it and helping family members feel -- we get kind of co-dependent you know, family members coming in here like me that were you know, just need someone to tell us 'it's going to be okay.""

Center for Recovery (CFR) offers a wide range of services to support family members and patients. Areas of the program that were identified by family members that would bolster the program are: offering more groups, residential programming and family counseling sessions.

"I think they really need to have more meetings because a lot of reasons why people can't attend is because Saturday mornings are difficult. Maybe there is an approach for a non-12 step kind of expansion for people that are not really totally comfortable with 12steps or would like to do something else occasionally and where there is a professional."

"The only thing I can say is if they can bring the residents back that might be more helpful. I think that was a major loss for them."

Another suggestion would be counselors at CFR offering counseling sessions once per week for the family members in order for the patient's counselor to have a better idea of what the issues are related to the family dynamics, presenting issues and ways to support the patient in their recovery.

"Having one-on-one sessions with [the counselor] -- I think if they had something where they can spend an hour with the family member, the primary family member or whatever, maybe one or two o the kids in the session. They can see what the dynamics are and what's going on. I think if I had something like that, I would have had more items addressed."

Family members identified specific aspects about Center for Recovery (CFR) that are more favorable than their Ala-non/Co-da counterpart. The following themes were identified: cross-talk, education and having a group facilitator.

Firstly, members expressed their appreciation for the cross-talk that is not only allowed, but encouraged by group members toward their peers. Family members stated that this is a great way of directly asking their peers questions and provided insight through suggestions from their own experiences. On the same note, family members identified they enjoy gaining insight from their peers, specifically around issues such as: maladaptive behavior patterns, co-dependency and empowerment to change their current situation, which tend to be prevalent topics.

"You can talk to the other people that are here in the meeting, people with experience are here to share that in a direct way and I think that's very valuable. But you can't have that

without a professional present to mediate because there are days, and they are rare, where you get a toxic personality in there."

"I still need a lot of feedback, so it's difficult for me when I sit at those [Co-Da/Ala-Non] meetings -- there's no cross talk I attend maybe a dozen and it's hard, it's harder to sit in kind of your own juices. The support groups at CFR are intended for that purpose of interaction and the support and the feedback and discussion."

Secondly, the facilitator and other group members offer psychoeducation and skills to family members around topics such as: mental illness, communication and active listening. Oftentimes, family members stated they are able to use these skills not only with the identified patient, but with others in their lives since they are foundational skills of interpersonal effectiveness.

"[CFR groups] transcend not just co-dependency and the addiction piece, but it transcends how to deal with people sometimes and work and stuff -- I think my son has some challenges. He's 19 and I think he's got some depression issues -- But if he asked for support or help on something, I'm more than willing to do it." "It's that whole process of you don't even realize you are living in this chaos and the whole idea of co-dependency and I have to learn that I have to interact with people different. That I play as much of a role of what is happening int he family dynamic and it's not even just how I interact with you know, my qualifier, it's how I interact with everyone in my life. How I am always attempting to rescue everyone, whether it's my coworkers, friends, parents or spouse, I am trying to rescue everyone."

Lastly, family members also recognized the benefit of having a professional facilitate groups for better management of the group. The majority of family member's expressed frustration in regards to Ala-Non/Co-Da groups for the lack of professionalism and consistency of the groups.

"I've been to some Ala-Non and Co-Da groups-- I just have been having a hard time with those. I feel like I don't relate to the people that are there and it tends to be just complaining. I think compared to something like this [CFR], there are professional therapists running the sessions so they kind of keep things on track-- versus some of the other support that's available where there's other people and no one is charge kind of situation."

"[Co-Da/Ala-Non meetings] the lack of professionalism or discipline that's the advantage of everyone being a volunteer and taking turns and no body having any roles versus something like this. I think it's extremely valuable."

The data yielded reasons for family members' involvement or lack of involvement with the patients' substance abuse treatment. The themes identified are: giving back to new-comers and positive outcomes.

The first reason as to why family members participate in groups each week is to give back to other members, specifically new-comers. A theme that was developed was this idea of passing on information that was instilled to them when they first began Center for Recovery (CFR). It can be perceived as a rite of passage concept where family members that are first entering this unique community are privileged to know specific details about the process and their role in it.

"[I] try to give back to new-comers that are coming in. Sometimes there's a few old timers that maybe roll off and stuff that they instilled or mentioned to us when we were new-comers coming in that I picked up and try and help bring that forward to the newcomers."

"I think, more of it is to I think, give back to CFR from what I learned there: to be more independent, to take care of me, to instill and share those things that were shared with me with the new-comers that are there."

Another reason family members participate in attending CFR groups is they have noticed a specific change in themselves with their own sense of recovery. As mentioned prior, family members receive feedback and suggestions from other groups members to help promote their own growth in areas that may be causing or contributing to larger issues related to the patient's drug/alcohol use. That being said, these changes can lead to healthier ways of living, independent of the patient's addiction and family members recognize positive outcomes within themselves that enhance their willingness to attend group each week.

"I could see the changes in myself and the calming effect of being confident in how things were changing in myself. How things were before, I felt unsure about what to do and what to say and how my feelings were kind of just all over the place and after coming for a while, I felt more confident about to do and what to say and my feelings weren't so out of control. I knew that the only way I could feel more confident and to feel strong and better was to continue to come."

"I mean it's been a real positive thing in my life. At this point, it's gotten me further along than I think I would have been. I probably, if it wasn't for CFR, probably still be married

and going through the same situation, but it's given me at least the strength to figure out I need to get out for my boys' health and for my own health."

Reasons for why family members were not involved with Center for Recovery (CFR) was dependent on a few factors. The following themes were identified: logistical reasons, group must meet expectations, fear of judgement and not being ready for change.

The first being logistical reasons such as not having childcare or having a schedule conflict with the specific time/day of the group.

"It's Saturday morning! I don't really want to be going there *every* Saturday right." "The only thing I can think of that would prevent me from coming would be if I had some sort of conflict in my schedule -- I have some children and if for some reasonI could not get a babysitter, that would be the only reason that would prevent me from coming."

Secondly, the family member must feel that the group meets their specific needs or expectations in order for them to prioritize the group and continue to attend on a regular basis.

"Every time I go to a meeting or a support group, I am giving up something else-whether it is going to the gym or spending time with my family, catching up on work, whatever. There's always something right? So, [the group] has to really be worth it."

Thirdly, family members do not want to participate in CFR groups due to the fear of being judged by others that are attending the group. Commonly, family members experience shame and embarrassment with past experiences related to their family member's drug/alcohol use and having to share with other strangers can be perceived as a daunting task.

"She won't talk about this and then talking about it brings up too many bad memories. And that she doesn't believe that people that people can't -- aren't judging her. She can't get to a point where she can be and not feel judged."

Lastly, a family member's participation in CFR groups is dependent on their readiness for change level. This can be due to a number of reasons. For instance, they could be avoidant of substance abuse treatment due to the unpleasant emotions that it could be bringing up for them. Another reason could be they are in denial and not comfortable in exploring or recognizing any role they may play in relation to the patient's addiction.

"I don't know if they don't like what they hear sometimes or they have other things to do. And I mean, part of this is-- and they talk about it in the sessions-- is you've got problems in terms of co-dependency and the things to try and take this on and stuff. Maybe they're not ready to hear that either."

"Some family members, I see the pain in their face when somebody suggests maybe thats not the best thing for them, never mind what's the best thing for the qualifier, it might not be the best thing for them, and it's hard for them to understand and accept-- to really accept that this is what this meeting is, what is in their best interest. People have -- I have seen that people have a hard time disconnecting that you can't put [the qualifier's] best interest before their own best interest and people have a hard time with that and argue it and get angry."

As previously mentioned, family members can be ambivalent about getting involved with Center for Recovery (CFR) programming due their own fear and anxiety with the potential changes that could impact them. The following themes were extracted from the data involving

barriers that impact a member's skepticism with participating in treatment: shift in identity, recognizing their issues, uncertainty of changes, accepting that loved one has an addiction and anger if patient does not change behavior.

The first theme that was developed was the shift in the family member's identity throughout the course of the family member's participation at Center for Recovery. A sub-theme would be family member's acknowledging and understanding their own issues apart from the patient's addiction. It was identified across all interviews that early on in the family member's attendance, there is a clear distinction of who the focus is supposed to be on and that focus should be on the person with the drug/alcohol problems. As time in the program progresses, most family members recognize that they are going through a recovery process for themselves and find themselves addressing common concerns, such as: reducing maladaptive behaviors, prioritizing own needs and learning how to be more independent.

"One of the first questions some people say when they come in is 'wait a minute, I'm not the one with the problem!" I am the good guy see, save this drama. I ant he good guy, they are the bad guy! And we need to get these roles straight."

"It's a process because when you first come in, it's all about caring, empathy and compassion, and then it's 'well, why don't you try this?'-- it was taking that shift off my qualifier and back onto me."

"The person that brought me there [CFR] keeps wondering why I go back and why I'm doing it. I say it's because I get something out of it and I help people who help other people. My kids ask me: 'why are you still going?' Mom doesn't go or Mom's not doing anything. I say 'It's not for mom, it's for me too.'" "I mean while that's not what I wanted to do, I think it's really good for me, you know? Like it's not good for me what we were do-- I was trying to keep up with him drinking for the past 17 years. Um and now it's great because I, you know, most days I don't drink anymore."

The second theme was the fear and anxiety around the family member vacating their codependent role and having to experience the uncertainty around what changes are going to happen now that the patient is without their drug of choice. This can bring up confusion and anxiety for family members regarding understanding their role that is transitioning in relation to the patient. This can include having to re-assess the relationship -- what is our bond now that we no longer drink together? Further, family members may feel a lack of control with the situation now that the patient with an addiction is looking to their treatment program for education, answers and support. A sub-theme developed was the difficulty family members have with accepting that their loved one has a problem with drugs and/or alcohol. Family members might go through their own process of grieving and feeling a sense of loss with the old lifestyle they once shared with the patient.

"For the first like month or two, I mean I would say I was quite in a distressed situation-having to come to the realization that like my husband had a problem that was out of his control. I didn't feel comfortable with that fact that I had to change my whole lifestyle. Like after I brought him here, I felt terrible because I'm like I don't know if this is a terrible place."

"One day I went home and had to clean out-- I got rid of all the alcohol in my house, which we had a lot of alcohol in the house. We had a lot of expensive like champagne and

wine that I had to, you know, pack up and I'm like 'goodbye friends!' And that's not what I wanted. Just like going through -- there was also a great sense of loss over how our life had been."

"We have been married for 17 years and together for like 18 or 19 years. Our whole life has been really centered around drinking -- everywhere we go. So, that was really hard because like I don't know what our life is gong to be like -- I don't know what we are going to do, you know, like if we go to a restaurant or a party. So you know, just thinking, it was just very overwhelming..."

Secondly, family member's may be experiencing negative emotions such as: shame, resentment or anger toward the patient especially if the patient's drinking/using does not change and the patient's level of commitment is not strong. It can be beneficial when family members accept and allow themselves to feel angry, sad or resentful toward their family member who struggles with addiction. This can result in the family member transitioning to later parts of the readiness for participating in treatment.

"Those things over the course of 30 years where I just started putting pieces together about things and you know, its like every 2-3 years she went through these episodes and stuff to where, you know, hospitalization or some sort of intensive doctor visits and, you know, had to happen. And I just -- I finally figured out that it just wasn't going to change in my circumstance after 30 years of this. A then I had to make the decision to say "I'm done." I never wanted to. We have two kids and everything and I never thought we'd be in that position, but after going through *this* and-- it was blatantly clear that nothing was going to change." "I often say in group: you can't look at your addicted loved one without thinking, 'if you really loved me, you wouldn't do this, you wouldn't put me through this.' And until you find a way of dealing with that question -- talking about just feels like it makes things worse because it brings up all those inadequacies, either it's guilt, shame, or you know, you feel unloved or betrayed."

"I am raising my grandson and doing everything I -- but there are times where I say 'you should be, you shouldn't have been born. This is not right.' So, you know, you have those feelings, but what I learned is that... hey, that's what you feel, baby! Ugly, hey, put it on the table, along with everything else. You an't do anything about it!"

The final concept was the family member's perspective of how they support the patient in their recovery. The themes that were developed were: the family member's commitment to their own recovery and setting concrete boundaries.

The first theme developed was the family member ensuring that they maintain their connection with Center for Recovery (CFR), whether it's going to family or parent groups, Saturday programming or CFR events that are offered to family members.

"I have learned that the best way I can help, is to help myself. Some meeting somewhere, somebody said the airline analogy where when the oxygen mask falls down, you need your oxygen first and then you do whomever's sitting next to you. And I can't do anything to change anybody else, but me."

"I see myself as an example of what not to do. I have made every -- I continue to make every possible mistake, yet I continue to learn and continue to be engaged in the process."

The second theme established was having clear and concrete boundaries of acceptable behavior(s). With co-dependency being a prevalent issue amongst families with issues of addiction, it is common concern that family members often do not have appropriate boundaries with their loved ones and are willing to sacrifice their own needs at the expense of the persons struggling with substance abuse issues.

"Making it really clear to him what the boundaries are around this. Things are never going to be how they were before, so really like making it clear that he can't sit around the house all day like drinking and not being productive because he will have to go live with someone else then. So that's be really clear and I think that helps a lot because it's pretty clear to him what his choices are and is he pretty clear that I am not messing around at all."

# CHAPTER V

#### DISCUSSION

The current study sought to understand the relationship between social support and its impact on an individual's recovery, while examining the factors that contribute to relapse. The data indicated no significant changes in average levels of depression, social support, treatment helpfulness or commitment to sobriety from T1 to T2. No significant changes from T1 to T2 in the areas of interest could be due to the short duration of time between the testing interval and variable conditions remaining the same throughout the course of the study.

When considering the variables of social support and depressive symptoms, they were found to be negatively correlated during the pre- and post-test trials. As

hypothesized, individuals with increased levels of social support reported lower levels of depression on the pre-test and post-test. This finding is consistent with Hser, Grella, Hsieh, Anglin, and Brown's (1999) findings of social support being a protective factor against relapse. This correlation remains true for individuals with less social support exhibiting higher levels of depressive symptoms. That being said, individuals that are supported by family, friends, co-workers, peers from groups and others are predicted to be less depressed in relation to their perceived amount of social support. Individuals suffering with substance use disorder can feel a sense of relief in knowing they are not alone while embarking on their recovery process. Additionally, this idea is consistent with the qualitative findings of the current study where patients reported they were more inclined to be honest toward family members and experience positive emotions with knowing their family members are involved and have some level of understanding of addiction. The theme of understanding addiction and family members acceptance of the patient's disease play a pivotal role in the patient's recovery. The value of family members being involved in treatment and understanding their addiction corresponds with the patient feeling less depressed and feeling positive emotions such as feeling loved by their family, proud of themselves and understood.

Similarly, depressive symptoms were negatively correlated with commitment to sobriety in the pre- and post-test. The more an individual is committed to their recovery, the less depressive symptoms they are experiencing. When patients are active in their recovery, it can include the individual structuring their schedules in order to prevent boredom and idle time. It can include participation in the following activities: attending

support groups, AA/NA groups, community events (e.g. AA softball league) and participating in other activities that promote recovery and socializing with other sober individuals. In doing so, patients are not only focusing on their health and wellness, but they are interacting with others and not isolating, which can be a hallmark symptom for increased levels of depression. Likewise, individuals that are less committed to their sobriety have increased levels of depression. Individuals that are struggling with a severe mood disorder co-occurring with their substance use disorder often times deal with greater difficulty with motivation and willingness to make a change in their lifestyle and making a life-long commitment. Further, recovery is an arduous journey and can seem unachievable to patients with depression and/or other mood disorders -- this could also be a contributing factor to elevated depressive symptoms. Hammerbacher & Lyvers's (2006) research demonstrate how mood and internal factors are commonly associated with relapse, specifically negative emotions such as: anger, sadness, depression, stress or guilt. Given these findings, when depression scores are low amongst individuals, they not only have an increased level of commitment to their sobriety, but they are also less likely to relapse due to their negative mood states.

The results of the current study indicate that patients who report higher levels of treatment helpfulness are predicted to have a greater commitment to sobriety. Patients that believe they are benefiting from Center for Recovery (CFR) programming have an increased level of commitment to stay clean from their drug of choice. This could be due to a number of reasons. Firstly, confirmation bias could be taking place where patients believe they are gaining useful knowledge from the program, therefore have the belief

they have skills and strategies to combat any obstacle that comes their way as they progress through their recovery. This sense of confidence could contribute to one's commitment and level of adequacy in dealing with the challenges that may emerge longterm for the individual. Secondly, CFR provides comprehensive services that not only include process and support groups, but also educational lectures that provide the patient and family foundational education focusing on the disease model of substance abuse, associated risks, harmful effects and areas to target in treatment. With the amount of education provided, patients are more informed as they progress into their stages of recovery and are aware of the harmful outcomes that they could possibly be faced with if they choose to continue using drugs and alcohol. This information and understanding of the disease model could impact the individual's dedication to remain sober and focus on their sobriety. Likewise, understanding the disease model was also highlighted in the qualitative results with patients' desire for the family members to understand the disease model in order for them to support the patient, remove the blame and acceptance of their identity of being a person addicted to drugs/alcohol.

Consistent with Matheson and Lukic's (2011) findings, fully integrating family members in the individual's substance abuse treatment can improve the likelihood of long-term sobriety while reducing the risk of relapse. Participants with high levels of social support predicted a greater commitment to sobriety. Individuals that have their loved ones participating in treatment, whether it is through Center for Recovery (CFR) or another treatment program, tend to be more committed to their recovery. This can be attributed to the individual who is suffering from substance use disorder not wanting to

disappoint or anger their family member by exhibiting a lack of motivation and/or engaging in behaviors that may increase the potential risk for relapse. A qualitative finding in the current study was the majority of patients experience positive emotions (e.g. feeling loved, proud of themself) when their family member is involved in CFR. It was reported that they enjoy making their family member proud and that the patient has some sort of desire to "prove" to their family member their level of commitment to their recovery. This finding supports the reality of a higher level of commitment from the patient when family members are actively involved and participating in their substance abuse treatment. Conversely, when patients are not receiving family support with their recovery or if they are feeling like the road to recovery is an individual process versus a collective one, it can impact the patient's desire and motivation to continuing the process of sustaining their sobriety due to the loneliness and isolation it may evoke.

The correlation between higher rates of treatment helpfulness predicted lower levels of depression scores. It is a common occurrence that individuals seeking addiction treatment have hit rock bottom or are in some sort of unfortunate circumstance as a result of their drug or alcohol abuse. At this point, the individual might be experiencing a poor quality of life and is ready for a change, or forced to get help either by a family member or in relation to their employment. Some reasons why individuals get help for their addiction include, but are not limited to the following: legal issues (e.g., DUI's, loss of custody), health complications, job loss, financial hardship, homelessness and interpersonal conflict. Treatment programs similar to Center for Recovery (CFR) can be perceived as a safe haven in the eyes of an individual with limited to no support or hope

due to their current circumstances. That being said, patients who perceive CFR as an effective program are said to have lower levels of depression. This can also be due to the level of support and hope that is gained through participating in the program at CFR. Patients gain a community of recovery, which include peers from various groups as well as counselors, nurses and physicians that are collaborating with the patient starting from the time they are on the detox unit through outpatient programming. The CFR program could represent hope for the patients and reduce their symptoms of hopelessness, helplessness and loneliness. As previously stated, depression scores are negatively associated with social support and social support is negatively associated with depression. The findings suggest a triad of factors: depression, social support and commitment to sobriety and to prevent relapse. This study indicates that these factors should be considered in designing treatment approaches. Integrating these areas could lead to enhanced commitment to sobriety and increase in engagement in the recovery process.

Specific to Center for Recovery (CFR), psychoeducation lectures and family process groups offered at CFR play an instrumental role in the recovery process for both, patients and family members. Education regarding the disease model and what addiction entails are two significant areas that patients would like their family members to understand. This can equate to individual and relational benefits such as: open-communication, acceptance of the patient's identity, increase in positive feelings and removal of blame formerly directed toward the patient. CFR's psychoeducation lectures provide individuals knowledge of what is substance use disorder, prevalent rates, treatment options and outcomes to be expected. As highlighted by

Matheson and Lukic's (2011) findings, this knowledge and understanding can assist in normalizing the experience of addiction and recovery and reducing the shame and guilt that is often experienced by the patient and family members.

Family members benefit from groups at CFR through having the space and ability to relate to other family members that historically or are currently struggling with similar feelings and/or situations with their loved one that has an addiction problem. The groups allow family members to provide additional insight into patterns that could be addressed independent of the patient. Initially, this can be a difficult shift for family members, but once they are open to feedback from their peers, they are able to discover areas within themselves they can improve. This process allows family members the ability for introspection and reflection in support of their own recovery process.

## Limitations

The findings of the current study should be interpreted in light of several limitations. Some limitations of this study include: convenience sampling, lack of a control group for comparison and randomization. There is little cultural and socioeconomic heterogeneity within the data set. The demographics of the sample consisted of affluent, white individuals, which is the prominent population John Muir Hospital serves due to insurance coverage and geographical region. The specific demographics and the aforementioned limitations of this study greatly impact the generalizability of the study to groups with dissimilar characteristics. Another point worth noting is the participants may have felt obligated to score higher on the treatment helpfulness scale due to my previous practicum experience at Center for Recovery's

outpatient program. There is potential that patients could have recognized me and scored higher on the treatment helpfulness scale due to my previous affiliation with the organization. That being said, data in the qualitative phase, specifically the treatment helpfulness scale, may be skewed. Additionally, the patients reporting higher scores for commitment to sobriety could be attributed to the patients that were selected by convenience sampling. The majority of patients that participated in this phase were involved in the aftercare outpatient program, which typically involve individuals in longterm recovery.

## **Future Research**

The current study elicits several new areas of research to be examined in future studies. A more comprehensive understanding of the effective ingredients across various skills training groups that contribute to relapse prevention. For instance, the examination of how patients benefit from attending process groups versus a relapse prevention groups. What skills are developed or refined as ways of coping with psychological, cognitive, behavioral and social/environmental stressors. This could inform substance abuse treatment programs toward ensuring it incorporates specific skills in group and individual services to patients and family members.

The qualitative findings of the current study spark several new inquires that could be addressed in future research studies. For instance, understanding what factors cause the shift in the family member's identity from playing a more co-dependent role to truly discovering their own areas of functioning that need improvement and/or attention. This

could be a helpful ingredient to incorporate in family education groups that are offered at Center for Recovery (CFR) in order for family members to learn earlier in the process, which would enhance family participation and engagement. The earlier family members attend treatment programming, the sooner they are informed of the chronic and progressive elements of addiction. This could lead to a handful of benefits like: reducing stigma, becoming more comfortable with the topic, reducing shame and increasing the family member and patient's hope for recovery. As a result, this would lead to more effective drug and alcohol treatment programs and knowledge of specific techniques that would help support the patient and family members with long-term recovery. Early involvement of family members in the recovery process will likely lead to greater understanding and integration of the recovery process into their own lives.

With the knowledge that patients typically thrive with greater social support in their recovery as well as combating depressive symptoms, it would be beneficial for treatment programs to develop a specific support group for patients that lack family and friend support as they progress through recovery. This could empower and enhance the treatment for patients through providing necessary support to cope with challenges that arise, and reduce isolation. This group could also promote a more fulfilling recovery experience with patients being able to relate to others that lack family support and develop a greater strength in the established fellowship.

Given that family members have a difficult time with accepting their family member's identity as a substance user, questions that come to mind are: can family

member's beliefs be a direct result of societal judgement and negatively influence a family member? Or are these factors rooted in years of anger and resentment as a result of past betrayal in relation to family disruption from the individual suffering from a substance abuse issue. It would be beneficial to discover the etiology of these beliefs specifically and how they directly affect the recovery process for the patient. Further, determining how these maladaptive views could be a barrier in the family member's own journey of recovery and motivation to participate in treatment. It is apparent that family members have a difficult time relinquishing control of the individual with an alcohol/drug problem and we have learned that often times this resistance is related to the family member's own anxiety around change, uncertainty and loss of their old lifestyle. It would be advantageous to learn about how treatment programs could help implement ways of managing these fears and anxiety by developing a curriculum that supports family members with their own process and promotes growth and healing for the entire family. Engaging the family member might facilitate them gaining a deeper appreciation of the stages of recovery process and may expedite the process of their own willingness to participate in change.

The results highlighted the negative correlation between depression and social support. Future researchers can take this finding and analyze if depression scores are reduced due to family involvement reducing isolation or if it is because of other factors. Isolation is a hallmark behavior that is most associated with Major Depressive Disorder. This could be the rationale as to why greater social support reduces one's depression; however, it could be due to reasons such as mood changes, stage in recovery, medication

changes, etc. Future research could attempt to uncover what is the driving force of this particular finding.

Given the heterogeneity of the sample collected in this study, it would be interesting to employ the same research design on a sample with diverse cultural and socioeconomic backgrounds. It would be helpful to determine if the study yields the same results as their counterpart. I specifically would like to identify the type of correlation between social support and depression, which may affect participants' commitment to sobriety in more collectivistic cultures. This additional finding may guide existing treatment programs with better supporting minority groups and emphasize the utility of attending groups in order to achieve a more collectivistic style of recovery.

# Appendix A

# Demographic Questionnaire

Please answer the following questions to the best of your ability. There are no right or wrong answers. The following questionnaires and your personal information will be stored in a locked cabinet to ensure patient privacy and confidentiality. If you have any questions and/or concerns with any of the following information, please ask the researcher, Katrina Ramirez.

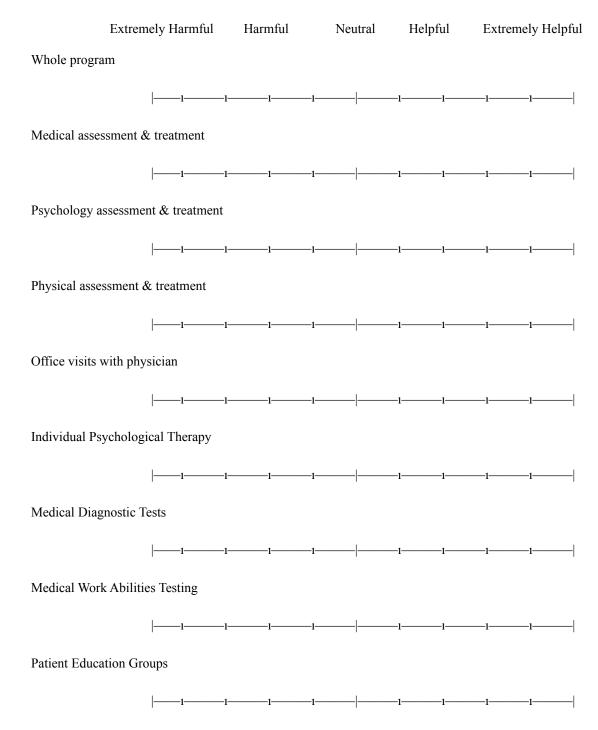
Are you a new patient at CFR? (circle one)			Yes					
If not, how long have you been a patient at CFR?								
What level of treatment a	are you? (circle one)	Residential	Inpatient	Outpatient				
Gender: (circle one)	Male		Female Othe					
Age: (circle one)	18-25	5 26-40	41-64	65+				
<b>Marital status (circle one</b> Seperated	): Single Married	Divorced	Widov	ved				
Sexual Orientation (circle	e one): Heterosexual	Homosexual	Bisexua	ıl Other				
<b>Ethnicity (circle one):</b> Asia	White In American/Pacific Isla	Latino/a Inder Biracia						
Education (circle one): Post high degree or higher	Some high school or school technical trainin							

	n <b>thly Ir</b> er not sa		circle o	ne): ≤ \$2,000	/month	\$2,001-\$3,00	0/month	≥\$3,001
Nun	nber of	Childr	en (circ	le one):	1	2	3	4+
Med	lical In	surance	e Status	s (circle one):	Medical	Medicare	Self-Payed	Private
Wha	at is yo	ur drug	g of cho	ice?				
Hov	v many	times h	nave yo	u relapsed? (	circle one)	0 1	2 3	4 5+
Hov	v many	times h	nave yo	u been throug	gh drug/alc	ohol treatme	ent? (circle on	e)
1	2	3	4	5+				
Doe	s your :	family a	attend t	he program o	on Saturda	ys at CFR? (	circle one) Ye	es No
Doe	s your i	family <b>j</b>	particip	ate in other <b>j</b>	programs t	hat support y	your recovery	? (e.g. Al-Anon,
<b>Co-</b> ]	Da etc.)	) (circle	one)	Yes	No			

#### **Appendix B**

Treatment Helpfulness Scale:

Please mark your answer on the line provided with an "**X**" based on how helpful the program was for you at Center for Recovery. The line ranges from "**extremely harmful**" to "**extremely helpful**." The middle of the scale is "**neutral**."



Group Counseling

## Appendix C

# Evaluation of Social System Scale:

Please choose **ONE** of your following social systems you are belonging to for answering this questionnaire:

Your Partnership	□ (number of members)
Your Family	$\Box$ (number of members)
Your Work team	$\Box$ (number of members)
Other:	$\Box$ (number of members)

## You are member of this social system (family, work team or other) since: \_\_\_\_\_ (# years)

Please refer to the last two weeks when answering the questions. For every statement, mark the answer that comes closest to your experience. If in doubt, follow your first impulse.

	Very Poor	Poor	Good	Very Good
1. For me, the way we talk with each other, is				
2. For me, the way we stick together, is				
3. For me, what we do for each other, is				
4. For me, the feeling between us, is				
5. For me, the way we decide what needs to be done, is				
6. For me, the way we recognize what will help us in reaching our goals, is				
7. For me, the way we make decisions, is				
8. For me, the way we find solutions to problems, is				
9. For me, how we adapt to change, is				
10. I think we will give similar responses to these questions.	Strongly Disagree	Disagree □	Agree	Strongly Agree D

### Appendix D

# Patient Health Questionnaire-9 (PHQ-9):

Over the <u>last 2 weeks</u>, how often have you been bothered by any of the following problems? Please circle to indicate your answer. **More than** 

Please circle to indicate your answer.	Not at all	Several days	More than half the days	Nearly every day
1. Little interest or pleasure in doing things	0	1	2	3
2. Feeling down, depressed, or hopeless	0	1	2	3
3. Trouble falling or staying asleep, or sleepi	ng 0	1	2	3
too much 4. Feeling tired or having little energy	0	1	2	3
5. Poor appetite or overeating	0	1	2	3
6. Feeling bad about yourself or that you are a failure or have let yourself or your family down	0 ily	1	2	3
7. Trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3
8. Moving or speaking so slowly that other people could have noticed? or the opposite being so fidgety or restless that you have bee moving around a lot more than usual		1	2	3
9. Thoughts that you would be better off dead or of hurting yourself in some way	d 0	1	2	3

### **Appendix E**

## Commitment to Sobriety Scale:

Indicate score on a 6-point likert scale from 1-6; "1" meaning strongly disagree and "6" meaning strongly agree. The last question is rated 1-10; "1" meaning not at all confident and "10" meaning very confident. Please circle your answer.

Willingness and Motivation to Stay Sober

Staying sober is the most important thing in my life.									
1	2	3	4	5	6				
I am totally co	I am totally committed to staying off alcohol/drugs.								
1	2	3	4	5	6				
I will do whatever it takes to recover from my addiction.									
1	2	3	4	5	6				
I never want t	to return to alco	hol/drug use ag	gain.						
1	2	3	4	5	6				
I have had enough alcohol and drugs.									
1	2	3	4	5	6				
I never want to use drugs or alcohol again.									
1	2	3	4	5	6				

How important is it for you to not drink or use drugs in the next 90 days?

1		2		3		4		5	6
How	confide	ent are	you that	t you wi	ill be ab	ole to sta	ay clean	and so	ober in the next 90 days?
1	2	3	4	5	6	7	8	9	10
1- not at all confident 10-very confident									

## Appendix F

How does it feel to have your family involved in your substance use treatment?

If they are not currently involved in your treatment, would you like them to be involved? Why or why not?

#### Appendix G

"Hello, my name is Katrina and I am a student at the University of San Francisco and I appreciate you participating in my study. My study will be determining the effectiveness of Center for Recovery's Family Program. I will be asking you a series of questions, there are no right or wrong answers. In order for me to gather accurate information, I ask that you to be as open and honest with me as you can. I realize that I will be asking you some questions that involve sensitive topics, so please let me know if you would like to take a break or go back to it at a later time. Also, this interview will be audio recorded for the purposes of data analysis. No identifying information will be included in the analysis of the recordings. Participating in this study is optional and you have the right to withdrawal at any time and your information will not be included in the study."

#### Questions during interview:

Are you involved in Family Aftercare or other CFR led groups?

If yes, how important was aftercare while your family member was in treatment in comparison to now?

Do you attend additional meetings outside of CFR (Al-Anon or CoDA meetings)?

Have you continued with CFR even after your family member has relapsed? How did you continue to stay connected?

- What was your motivation to continue with treatment? Prompt – What encouraged you to come to treatment?
- Why would you stop treatment? Prompt – What are some reasons why people (or family members) stop treatment?

- How do you see yourself in supporting the patient's recovery?
- Prompt What do you think you can do to help in the recovery process?

Do you have any suggestions of other services that CFR could offer you?

#### References

- Aguilar-Raab, Corina, Grevenstein, Dennis, & Schweitzer, Jochen. (2015). Measuring social relationships in different social systems: The construction and validation of the Evaluation of Social Systems (EVOS) Scale. PLoS ONE, Vol 10(7).
- Arneklev, Bruce J., Harold G. Grasmick, Charles R. Tittle, and Robert J. Bursik Jr. 1993. "Low Self-Control and Imprudent Behavior." Journal of Quantitative Criminology 9:225–247.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. Qualitative Research in Psychology, 3(2), 77-101. doi:10.1191/1478088706qp063oa
- Bröning, S., Kumpfer, K., Kruse, K., Sack, P., Schaunig-Busch, I., Ruths, S., & ... Thomasius, R.
  (2012). Selective prevention programs for children from substance-affected families: A comprehensive systematic review. *Substance Abuse Treatment, Prevention, And Policy*, 7

"California National Survey of Substance Abuse Treatment Services (N-SSATS)", 2010.

- Cheung, C., Lee, T., & Lee, C. (2003). Factors in Successful Relapse Prevention Among Hong Kong Drug Addicts. *Journal of Offender Rehabilitation, 37*(3-4), 179-199. doi:10.1300/ j076v37n03\_10
- Chapman, Stanley L., Jamison, Robert N., & Sanders, Steven H. (1996). Treatment Helpfulness
  Questionnaire: A measure of patient satisfaction with treatment modalities provided in
  chronic pain management programs. Pain, Vol 68(2-3), 349-361. doi: 10.1016/
  S0304-3959(96)03217-4. © 1996 by Elsevier. Reproduced by Permission of Elsevier.
- Contra Costa Health Services. (n.d.). Population Health Data. Retrieved from <u>http://cchealth.org/</u> health-data/hospital-council/2010/pdf/51\_substance\_abuse.pdf

- Daley, D. C. (1987). Relapse prevention with substance abusers: Clinical issues and myths. *Social Work*, *32*(2), 138-142.
- Deng, R., Li, J., Sringernyuang, L., & Zhang, K. (2007). Drug abuse, HIV/AIDS and stigmatisation in a Dai community in Yunnan, China. Social Science & Medicine, 64(8), 1560-1571. doi:10.1016/j.socscimed.2006.12.011

Field, A. (2005). *Discovering statistics using SPSS* (2<sup>nd</sup> edition). London: Sage Publications Ltd.

- Fisher, E. M., Helfrich, J. C., Niedziałkowski, C., Colburn, J., & Kaiser, J. (1995). A single site treatment evaluation study of a military outpatient drug and alcohol program. *Alcoholism Treatment Quarterly*, 12(4), 89-95. doi:10.1300/J020V12N04\_08
- Garner, B. R. (2009). Research on the diffusion of evidence-based treatments within substance abuse treatment: A systematic review. *Journal Of Substance Abuse Treatment*, *36*(4), 376-399. doi:10.1016/j.jsat.2008.08.004
- Gibson, Chris, Christopher J. Schreck, and J. Mitchell Miller. 2004. "Binge Drinking and Negative Alcohol-Related Behaviors: A Test of Self-Control Theory." Journal of Criminal Justice 32:411–420.
- Giordano, A. L., & Cashwell, C. S. (2014). Exploring the relationship between social interest, social bonding, and collegiate substance abuse. *Journal Of College Counseling*, 17(3), 222-235. doi:10.1002/j.2161-1882.2014.00059.x
- Giordano, A. L., Clarke, P. B., & Furter, R. T. (2014). Predicting substance abuse relapse: The role of social interest and social bonding. *Journal Of Addictions & Offender Counseling*, 35(2), 114-127. doi:10.1002/j.2161-1874.2014.00030.x

- Glaser, B. G. & Strauss, A. (1967). *The discovery of grounded theory: Strategies for qualitative research*. Chicago: Aldine.
- Gottfredson, Michael R. and Travis Hirschi. 1990. A General Theory of Crime. Stanford, CA: Stanford University Press.
- Hall W, Carter A, Forlini C. (2015). The brain disease model of addiction: is it supported by the evidence and has it delivered on its promises? The Lancet Psychiatry: 2(1), 105–10.
- Hammerbacher, M., & Lyvers, M. (2006). Factors associated with relapse among clients in Australian substance disorder treatment facilities. *Journal Of Substance Use*, *11*(6), 387-394. doi:10.1080/14659890600708266
- Hendershot, C. S., Witkiewitz, K., George, W. .., & Marlatt, G. A. (2011). Relapse prevention for addictive behaviors. *Substance Abuse Treatment, Prevention, And Policy*, 6doi: 10.1186/1747-597X-6-17
- Hser, Y. I., Grella, C. E., Hsieh, S., Anglin, M. D., & Brown, B. S. (1999). Prior treatment experience related to process and outcomes in DATOS. Drug and Alcohol Dependence, 57, 137–150.
- Kelly, J. F., & Greene, M. C. (2014). Beyond motivation: Initial validation of the Commitment to Sobriety Scale. *Journal Of Substance Abuse Treatment*, *46*(2), 257-263. doi:10.1016/ j.jsat.2013.06.010
- Klein, Audrey A., Slaymaker, Valerie J., & Kelly, John F. (2011). The 12 Step Affiliation and Practices Scale: Development and initial validation of a measure assessing 12 step

affiliation. Addictive Behaviors, Vol 36(11), 1045-1051. doi: 10.1016/j.addbeh. 2011.06.011, © 2011 by Elsevier. Reproduced by Permission of Elsevier.

- Knight, D. K., & Simpson, D. D. (1996). Influences of family and friends on client progress during drug abuse treatment. Journal of Substance Abuse, 8(4), 417–429.
- Kroenke, K., Spitzer, R. L., & Williams, J. B. W. (1999). Patient Health Questionnaire-9 [Database record]. Retrieved from PsycTESTS. doi: <u>http://dx.doi.org/10.1037/</u> t06165-000
- Kulesza, M., Larimer, M. E., & Rao, D. (2013). Substance use related stigma: What we know and the way forward. Journal of Addictive Behaviors Therapy & Rehabilitation, 2, 782. doi:10.4172/2324-9005.1000106
- Litt, M. D., Kadden, R. M., & Stephens, R. S. (2005). Coping and self-efficacy in marijuana treatment: Results from the Marijuana Treatment Project. *Journal Of Consulting And Clinical Psychology*, 73(6), 1015-1025. doi:10.1037/0022-006X.73.6.1015
- Longo, D. L., Volkow, N. D., Koob, G. F., & Mclellan, A. T. (2016). Neurobiologic Advances from the Brain Disease Model of Addiction. *New England Journal of Medicine N Engl J Med*, 374(4), 363-371. doi:10.1056/nejmra1511480
- Mankowski, E. S., Humphreys, K., & Moos, R. H. (2001). Individual and contextual predictors of involvement in twelve-step self-help groups after substance abuse treatment. American Journal of Community Psychology, 29, 537–563.
- Marlatt, G. A., & Gordon, J. R. (1985). Relapse Prevention: maintenance strategies in the treatment of addictive behaviors. New York: Guilford Press.

- Matheson, J. L., & Lukic, L. (2011). Family treatment of adolescents and young adults recovering from substance abuse. *Journal Of Family Psychotherapy*, 22(3), 232-246. doi: 10.1080/08975353.2011.602620
- McMahon, R. C. (2001). Personality, stress, and social support in cocaine relapse prediction. Journal of Substance Abuse Treatment, 21, 77–84.
- Monti, P. M., Abrams, D. B., Binkoff, J. A., Zwick, W. R., Liepman, M. R., Nirenburg, T. D., & Rohsenow, D. J. (1990). Communication skills training with family and cognitive behavioral mood management training for alcoholics. *Journal of Studies on Alcohol*, *51*, 263–270.
- Schaefer, B. P., Vito, A. G., Marcum, C. D., Higgins, G. E., & Ricketts, M. L. (2015). Examining adolescent cocaine use with social learning and self-control theories. *Deviant Behavior*, 36(10), 823-833. doi:10.1080/01639625.2014.977178
- Schuman-Olivier, Z., Greene, M. C., Bergman, B. G., & Kelly, J. F. (2014). Is residential treatment effective for opioid use disorders? A longitudinal comparison of treatment outcomes among opioid dependent, opioid misusing, and non-opioid using emerging adults with substance use disorder. *Drug And Alcohol Dependence*, *144*178-185. doi: 10.1016/j.drugalcdep.2014.09.009
- Spjeldnes, S., Jung, H., Maguire, L., & Yamatani, H. (2012). Positive family social support:
  Counteracting negative effects of mental illness and substance abuse to reduce jail exinmate recidivism rates. *Journal Of Human Behavior In The Social Environment*, 22(2), 130-147. doi:10.1080/10911359.2012.646846

- Stringer, K.L. & Baker, E.H. (2018). Stigma as a barrier to substance abuse treatment among those with unmet need: An analysis of parenthood and marital status. *Journal of Family Issues*, 39(1), 3-27. doi:10.1177/0192513X15581659
- Substance Abuse and Mental Health Services Administration, 2010 State Profile California National Survey of Substance Abuse Treatment Services (N-SSATS). (2010).
- Substance Abuse and Mental Health Services Administration. (2012, 2013, and 2014). National Survey on Drug Use and Health: Comparison of 2012-2013 and 2013-2014 Population Percentages (50 States and District of Columbia). <u>Retrieved from http://</u> <u>www.samhsa.gov/data/sites/default/files/NSDUHsaeShortTermCHG2014/</u> NSDUHsaeShortTermCHG2014.pdf
- Volkow, N. D., & Koob, G. (2015). Brain disease model of addiction: Why is it so controversial? *The Lancet Psychiatry*, 2(8), 677-679. doi:10.1016/s2215-0366(15)00236-9
- Weinstock, J., Farney, M. R., Elrod, N. M., Henderson, C. E., & Weiss, E. P. (2016). Exercise as an adjunctive treatment for substance use disorders: Rationale and intervention description. *Journal Of Substance Abuse Treatment*, doi:10.1016/j.jsat.2016.09.002
- Witkiewitz, K., Villarroel, N. A., Hartzler, B., & Donovan, D. M. (2011). Drinking outcomes following drink refusal skills training: Differential effects for African American and non-Hispanic White clients. *Psychology Of Addictive Behaviors*, 25(1), 162-167. doi:10.1037/a0022254