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Factors Contributing to Substance Abuse Treatment Completion Among Alaska Natives

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Abstract

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MS, Alaska Pacific University, 2007

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Dissertation Submitted in Partial Fulfillment

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Abstract

Alaska Native populations have experienced significant struggles with addictions to alcohol and other substances. The Alaska Native population's access to treatment services is riddled with problems. This quantitative study served the purpose of identifying factors that lead to the prediction of successful treatment discharges among Alaska Native clients who received treatment for substance abuse at a treatment center in Alaska. Based on the theoretical framework of Marlatt's relapse prevention theory, using archival data, as well as a cross-sectional, quantitative research design, predictive variables of the efficacy of substance use treatment among outpatient clients ($N = 278$) were examined. Multiple regression analysis was used to assess whether adverse experiences, depression levels, social support, substance abuse, and sociocultural variables such as ethnicity, age, gender, mandatory/voluntary treatment enrollment predicted successful discharge in outpatient treatment. Results indicated that only gender was significantly connected to treatment outcomes. Women were more likely than men to successfully complete the treatment program. Several limitations could explain these results including the use of instruments that were not empirically validated, the use of self-report measures, and the quality of the assessment process. Results of this study could be used to focus on understanding and developing specific treatment modalities for men with substance abuse problems. Future studies should use empirically validated measures and a precise program of research.

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Chapter 1: Introduction

Introduction

This quantitative study explored factors that contribute to successful treatment discharge among Alaska Native (AN) clients who received treatment for substance abuse at an urban treatment center in Alaska (Feldstein, Venner, & May, 2006; Malcolm, Hesselbrock, & Segal, 2006; McHugh, 2003; Namyniuk, Brems, & Kuka-Hindin, 2001; Schacht & White, 2003). Results of this study will have the potential to help treatment providers gain useful insight into the factors that predict successful treatment completion for AN clients. This chapter provides background information, problem statement and the purpose of this study. Additionally, this chapter will cover an overview of the variables of the project, the research question and hypotheses, and the theoretical framework that guided the research. The significance of this study, in addition to its assumptions and limitations is also discussed.

Background

Several searches of the available scholarly literature demonstrated that scant research has been done on the factors that could be used to predict the successful completion of substance abuse treatment programming in Alaska. As previously mentioned, this study focused primarily on the AN population and the predictive variables that can assist treatment programs in setting their clients up for a successful treatment episode (Wolf, Duran, Dulmus, & Manning, 2014).

The review of the literature showed that the AN populations have weathered significant struggles with deadly addictions to alcohol and other substances (Chong &

Lopez, 2007; Doshi & Jiles, 2006; Feldstein et al., 2006; Hawkins, Marlatt, & Cummins, 2004; Malcolm et al., 2006; Namyniuk et al., 2001; Young & Joe, 2009). For example, the prevalence of incidences of alcoholism, addiction, and substance use-related arrests involving AN individuals is considerably high, with rates that are often many times the national average (Chong & Lopez, 2007; Doshi & Jiles, 2006). Feldstein et al. (2006), as well as Parks et al. (2003), noted that there is also a strong correlation between substance use and negative interactions with the legal system. Feldstein et al. and Parks et al. (2003) also suggested that the AN population, particularly AN men, are more likely to be arrested, convicted of a substance-related crime, and serve their sentences, as a direct result of their addiction issues.

Problem Statement

Individuals in the United States who have experienced alcohol or drug related arrests have reported participating in upwards of 45 treatment episodes and typically are subject to multiple alcohol and drug related incarcerations. In a more specific examination of this issue it was found that the AN population is significantly overrepresented in the United States justice system (Feldstein et al., 2006). According to the available research, both AN men and women have experienced a high occurrence of arrests that are directly related to their use of substances (Feldstein et al., 2006; Malcolm et al., 2006; Namyniuk et al., 2001). These arrests often involved crimes such as public drunkenness and driving under the influence.

Some researchers have found that individuals within the American Indian (AI) population presented a heightened tendency to demonstrate episodic drinking with

periods of abstinence followed by heavy binge drinking (Dickerson, Roichaud, Teruya, Nagaran, & Hser, 2012). Whereas, the AN population appears to demonstrate more prolonged periods of alcohol and drug use with less time spent abstinent (Dickerson et al., 2012; Feldstein et al., 2006; Mohatt et al., 2008; Namyniuk et al., 2001; Wolf et al., 2014). Therefore, treatment programs are often left in the dark when faced with the conglomeration of ethnicities that Alaska presents (State of Alaska [SOA], 2011). When attempting to provide behavioral health services in one of the most diverse states in United States of America, it is important for the providers to understand the challenges they can potentially encounter (SOA, 2011).

The AN population's access to treatment services is riddled with problems (Malcolm et al., 2006). When seeking treatment, the AN people face emotional barriers, such as feeling embarrassment and are often stereotyped (Malcolm et al., 2006; Namyniuk et al., 2001). They also encounter geographical, poverty issues and many other struggles. Therefore, at times treatment can appear to be an impossible feat (Feldstein et al., 2006; Malcolm et al., 2006; Namyniuk et al., 2001).

Purpose of the Study

The purpose of this study was to identify factors that contribute to successful treatment discharge among AN clients who received treatment for substance abuse at an urban treatment center in Alaska. Using archived data from an Anchorage-based nonprofit, the research will have the potential to be used to strengthen treatment programs by the identified trends in the data. These trends can be used to increase the likelihood that AN individuals will complete their treatment programs and achieve sobriety. This is

in an effort to assist in the continued battle against the cycle of addiction in the State of Alaska.

In this study I explored whether the severity of substance abuse, adverse experiences, social support, and sociocultural variables (such as ethnicity, age, gender, and mandated/voluntary treatment enrollment) predict successful discharge in outpatient treatment setting for substance abuse. By understanding what factors contribute to successful treatment completion, treatment providers can gain useful information that has the potential to be applied in treatment to set their clients up for successful attempts at maintaining sobriety. In order to increase the likelihood of a successful treatment episode, the treatment provider may be able to incorporate these factors into their clients' treatment plans. By understanding how variables, such as the severity of substance abuse, adverse experiences, social support, and socio-cultural variables affect treatment completion, a provider can specifically personalize and tailor a client's treatment episode to that individual's unique set of circumstances; thus, creating a conceptually guided pathway through the treatment process that is personalized, meaningful, and client-centered.

Variables

Several variables were used in this research study. The dependent variable was the type of discharge from the nonprofit treatment agency's outpatient program. The clients were categorized into either successful or unsuccessful discharge. A successful discharge means that the client completed all components of their treatment plan and made enough progress towards their recovery and sobriety that their counselor graduated

them from the program. An unsuccessful discharge means that the client, in some manner, did not complete the program or make enough progress towards their recovery. The independent variables included adverse experiences, depression levels, social support, substance abuse, and sociocultural variables (ethnicity, age, gender, and mandatory/voluntary treatment enrollment).

Research Question and Hypotheses

The research question, as well as the null and alternative hypothesis, that guided this study is provided below.

Research Question 1: Do adverse experiences, depression levels, social support, substance abuse, and sociocultural variables (ethnicity, age, gender, and mandatory/voluntary treatment enrollment) predict successful discharge in outpatient treatment for substance abuse?

$H_0$1: Adverse experiences, depression levels, social support, substance abuse, and sociocultural variables (ethnicity, age, gender, and mandatory/voluntary treatment enrollment) will statistically significantly predict successful treatment discharge.

$H_1$1: Adverse experiences, depression levels, social support, substance abuse, and sociocultural variables (ethnicity, age, gender, and mandatory/voluntary treatment enrollment) will not statistically significantly predict successful treatment discharge.

Theoretical Framework

The theoretical framework for this proposed study was based on Marlatt's Relapse Prevention theory. This long-standing theory has been prevalent in the field of substance addiction for over 30 years (Hendershot, Witkiewitz, George, & Marlatt,

2011). Marlatt's theory suggests that there are two different types of factors that can influence relapse (Larimer, Palmer, & Marlatt,1999). There are factors such as coping skills, which is referred to as immediate determinants and then there are life style factors, such as cravings, that are referred to as covert antecedents. This theory leads on the premise that there are only two possible outcomes to treatment (Larimer et al., 1999): a person will either remain completely abstinent from all mind and mood altering substances, or they relapse back into use. It is founded on social-cognitive psychology and integrates a conceptual framework of the relapse process with strategies for preventing relapses (Larimer et al., 1999).

Nature of the Study

This quantitative study utilized archival data from a nonprofit agency, which is Alaska's largest state-funded, non-tribal, behavioral health provider and offers 45 programs across the state. This agency provides Dual Diagnosis Capable (DDC) Substance Use Disorder (SUD) treatment services, mental health treatment, transitional housing, and offender treatment. The project analyzed the archived data of 278 clients' treatment episodes and examined several variables to understand which ones predicted successful treatment discharge. These variables included: adverse experiences, depression levels, social support, substance abuse, and sociocultural variables (ethnicity, age, gender, and mandatory/voluntary treatment enrollment).

Data on these variables was extracted from the Alaska Screening Tool (AST) scores, which is an instrument administered once per client at their time of admission (Appendix A). The scores from the Client Status Review (CSR), which is an instrument

administered at the time of admission and is readministered approximately every 90 to 135 days, as well as at the time of the client's discharge (SOA, 2011) (see Appendix A for a copy of the AST and Appendix B for a copy of the CSR). Logistic regression is the statistical analysis that was used to test the proposed hypotheses.

Definitions

The following are definitions of the commonly used terms in this study. They are presented in alphabetical order:

Addiction: Addiction is a chronic disease which is characterized by an inability to abstain and often involves relapses. If a person affected by addiction fails to seek treatment, this disease can result in permanent impairment or an early death (American Society of Addiction Medicine (American Society of Addiction Medicine [ASAM], 2011).

Adverse childhood experiences (ACEs): ACEs consist of any form or combination of sexual, physical, or psychological trauma inflicted on a child. Additionally, substance abuse in the home, mental illnesses, and other forms of violence can also contribute to adverse experiences in a child's life (Campbell, Walker, & Egebe, 2016).

*Alaska Nat*ive: An aboriginal person of Alaska, which includes American Indians, Eskimos, and Aleut (Centers for Disease Control [CDC], 2015).

Alaska Automated Information Management System (AKAIMS): This software hosted by the SOA's Division of Behavioral Health that serves as an electronic health record and an information management system (SOA, 2015).

Archival data: Archival data is data that is gathered and stored before any research commences (University of Virginia, 2015).

Behavioral health: The SOA defines behavioral health as a method of examining the mind and body of a person, as well as caring for their mental and physical needs (SOA, 2015).

Dual diagnosis capable (DDC): DDC refers to a programs ability to provide clinically appropriate services to clients and their families who experience co-occurring mental health and substance use disorders (University of Iowa, n.d.)

Evidence-based practices (EBP): EBP refers to a methodology of delivering client care that is based on the most current, relevant, and scholarly research in the field (APA, 2006).

Level of care (LOC): The ASAM LOC is used to assess the severity of a client's substance use and place them into the appreciate intensity of treatment (ASAM, 2001).

Relapse: Relapse is defined as a return to use after a period of abstinence (ASAM, 2011).

Relapse prevention: A methodology employed to prevent relapse back into substance use (ASAM, 2011).

Substance use: Substance use refers to the of mind or mood controlling substances despite negative consequences (APA, 2013).

Sobriety: Sobriety refers to achieving and maintaining total abstinence from all mind and mood altering substances (ASAM, 2001).

Treatment responsiveness: Treatment responsiveness refers to a client's reaction to the treatment services provided to them. This can be witnessed through their behavioral changes, their level of engagement and their willingness to engage in services, and their demonstrated ability to work towards and achieve sobriety (Larimer, Palmer, & Marlatt, 1999).

Assumptions

One assumption that existed in this study pertained to the integrity of the data. The assumption was made that the raw data, which was directly reported by the client and collected by the treatment provider, was reported honestly, collected accurately, and that the raw data were also completely and correctly entered into the AKAIMS. AKAIMS was developed to launch the SOA in to the world of using electronic health records and data collection tools. It is a state-wide system, whose use is required by the Alaska Division of Behavioral Health (DBH), which collects pertinent data on all individuals who are served by DBH grantees (SOA, 2015). Therefore, the assumption existed that all information collected regarding the AST and CSR was inputted into AKAIMS, and not just left in the client's paper record. Additionally, there is an assumption that the tools used to collect the data, the AST and CSR, are valid and reliable tools. It was assumed that these assessments were measuring and assessing the information that they were originally created to target.

Several assumptions relate to the statistical analysis that was used in this study, which was a logistic regression. Logistic regression is a popular and widely used method of statistical analysis (Li, 2014). According to Reed and Wu (2013), there are several

assumptions of logistic regression. These assumptions include that is not assumed that there is a direct relationship between the dependent and independent variables. The dependent variable must be composed of two categories; the independent variables do not necessarily need to be interval, linearly related, or normally distributed; and the categories must consist of variables that are unduplicated and each variable must be assigned to a category (Reed & Wu, 2013).

Scope and Delimitations

The scope of this study focused on the predictive variables that could be used to assist substance use treatment programs to increase the likelihood of a successful treatment episodes for the AN population. This topic was chosen due to a lack of research available on this particular topic, and when compounded by the high rates of alcoholism and drug addiction with Alaska's native peoples, further investigation was warranted (Feldstein et al., 2006; Malcolm et al., 2006). The predictive variables that were included in this study are the participants' severity of substance abuse, legal involvement, depression, social support, and sociocultural variables such as ethnicity, age, gender, and mandated/voluntary treatment enrollment.

This study examined archival data from a nonprofit substance use treatment provider in Anchorage, Alaska. The population chosen for this project included men and female AN's, ages 18 years and older, who were identified as having an alcohol or drug addiction and who participated in outpatient substance use treatment programming. Based on these identified factors, data were retrieved from AKAIMS for 288 client cases. Several studies have been published regarding the high occurrence of addiction within the

AN population. Many researchers have discussed the lack of available treatment resources and cultural stigmas a person of AN descent may confront when seeking treatment services. This study is unique due to the incorporation of predictive variables that could allow for treatment programs to enhance their cultural sensitivity and construct a program that is truly tailored to the needs of their clients.

Limitations

There were limitations to using AKAIMS and also to using the AST and CSR. Foremost, while the SOA developed and adopted the AST and CSR, and made the use of these tools mandatory for all grantees, they are not empirically validated measures. Nearly all participants had an AST, which is only administered once upon admission, in their AKAIMS record. However, the CSR, which is administered upon admission and then every 90-135 days thereafter, was not as consistently found in the AKAIMS records of these participants. Some participants had no CSRs in their AKAIMS record, others had one or two CSRs in AKAIMS, and some had all three.

The prevalence of the CSR data in each participant's record is noted as a limitation and is important to the study. Individuals whose records contained all three CSRs are most evenly and accurately represented in the data. I was able to see their responses at the beginning of their treatment, at the midway point, and at the end. This allowed for a good comparison of progress. The other records, those with at least two CSRs, allowed for before and after comparison; however, those records that contained only one CSR or none allowed for no comparisons to be made.

Significance of the Study

The intention of this study was to contribute to the body of research regarding the provision of treatment services in Alaska. The expectation is that this study will create social change by contributing to the behavioral health field in Alaska and by providing another piece of evidence that demonstrates correlations between demographic characteristics, client reported responses on the AST and CSR, and change over time. All of which lead to discharge from the program; however, using predictive factors, this study could begin to steer Alaskan providers in the direction of using those predictive factors to guide the course of treatment on an individualized level of enhance the client's chances of successfully completing their program.

The AN population, Alaska's First people, are sadly often referred to as chronic inebriates who do not wish to better themselves. They are typically stigmatized by what the residents of Alaska's communities see when driving by them on the road. Their labels derive from the media who covers the stories of the homeless camps, which are often times fraught with alcohol and drug-fueled violence, and by passersby who see them standing by the edge of the road, holding their cardboard signs, and begging for money, food, or alcohol. Results of this study may have the potential to push forward a social change movement in Alaska that encourages this States' behavioral health field to analyze its substance use programs and incorporate strategic methods of program development to best set their clients up for a lifetime of sobriety.

Summary

This study focused on treatment of substance use in Alaska. Alaskan providers face a multitude of challenges including service areas that stretch for thousands of miles, lack of connectivity, and other trials of treatment provision in a state that is 90% rural. Additionally, Alaska is a state that is home to hundreds of different ethnicities. These issues present some interesting situations for substance use treatment providers to try and overcome.

The occurrence of drug and alcohol use in Alaska is consistently on the rise, and despite this increasing problem, there is a gap in the literature when it comes to understanding how urban treatment providers are tackling this dilemma. A large amount of literature was available on the problem itself, substance use in Alaska or addiction issues within the Alaska Native population. Unfortunately, when seeking literature regarding the provision of services in a state as diverse as Alaska, there was hardly anything to be found.

Chapter 2 includes a review of the literature on theories of addiction, substance abuse and dependence, diagnosis, perception of the need for treatment, treatment seeking, and reasons individuals choose not to enter into treatment, as well as relapse and relapse prevention. Chapter 3 presents the research design and methodology including the study sample, instrument and materials, data source, study variables, and data analysis.

Chapter 2: Literature Review

Introduction

This chapter presents a review of the available research on the AN population, substance abuse, and the efficacy of treatment. The chapter is divided into several sections that include: Theoretical/Conceptual Framework, Addiction in the AN and AI Populations, a Portrait of Alaska, Regions of Alaska, Substance Use in the Alaska Native Population, A Historical Perspective, The AN Response to Therapy, Substance Abuse Treatment and Relapse, Perception of Recovery, Obstacles in Pursuing Treatment, Culturally Appropriate Interventions, Treatment Modalities, Relapse Prevention, Treatment Provided at the Nonprofit Agency, Predictive Variables of Treatment Success for Substance Abuse, as well as a summary of the chapter.

Literature Search Strategy

The literature was largely gathered through Walden University's library, using databases such as PsycINFO and PsycARTICLES. Other websites, such as the State of Alaska's website, were also used to gather important information for the literature review. I compiled the literature review by using key word searches through various electronic data bases such as Academic Search Complete, CINAHL Plus with Full Text, SocINDEX with Full Text, PsycARTICLES, PsycINFO, and MEDLINE with Full Text. Several books, such as the *American Society of Addiction Medicine's Patient Placement Criteria for the Treatment of Substance-Related Disorders and the American Psychiatric Associations [APA] Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition* were carefully selected and used in this research. Additionally, some government

resources, such as the United States Census and the Alaska Department of Labor were utilized for the collection of data and statistics. Some of the key words *searched* or *used* for this study included *Alaska Native, American Indian, addiction, adverse childhood experiences, substance use treatment, relapse prevention, trauma, violence, culture, assessment, therapy, rehabilitation, counseling, barriers, tradition, alcoholism, women, pregnant women, addicted mothers, recovery model, gender specific treatment, qualitative*, and *phenomenological*.

Several searches of the available scholarly literature demonstrated that inadequate research has been done on the efficacy of identifying factors that contribute to, and predict, successful treatment discharge among AN clients who received treatment for substance abuse at an urban treatment center in Alaska. For example, searches of *Alaska Native + substance use disorders +treatment* and *Alaska Native + addictions + treatment* yielded no search results. The majority of research utilized for this study were dated between present time and 1995; however, there were a few articles that were incorporated into this research that dated as early 1990 and one is dated 1985. These older articles were only used for this project due to their importance and pertinence to the research.

Theoretical/Conceptual Framework

The theoretical framework for this study was based on Marlatt's relapse prevention theory. This long-standing theory has been prevalent in the field of substance addiction for over 30 years (Gustafson, Shaw, Isham, Baker, Boyle, & Levy, 2011; Hendershot et al., 2011). According to the researchers, a relapse is characterized by a return to use of alcohol or drugs after having had a period of abstinence (Davis,

Campbell, Hildon, Hobbs, & Michie, 2014; Gustafson et al., 2011; Larimer et al., 1999). There are certain factors that have been identified as predictors of relapse. According to Larimer et al. (1999), high-risk situations can include stressful life situations, depression, anxiety, being bored or lonely, and anger. Other situations that can contribute to relapse include arguments with friends or families, relationship problems, and social stressors. Social stressors could involve being invited to a gathering where alcohol is being consumed or being pressured to have a drink (Gustafson et al., 2011; Larimer, Palmer, and Marlatt, 1999). One can also experience triggers that change a person's emotional state and remind them of their "using days" or makes them experience strong cravings (Hendershot et al., 2011; Larimer et al., 1999). A trigger could be a commercial on television or a song on the radio. A trigger could even be a specific time of year or running into an old friend.

The research asserts that although these high-risk situations often precipitate relapse, it is truly the person's response to the triggers that actually determines whether or not a relapse will occur (Gustafson et al., 2011; Larimer, Palmer, and Marlatt, 1999). An individual who has not yet acquired the necessary coping skills to appropriately deal with their triggers and the environment around them is much more likely to experience a relapse. Therefore, it is not difficult to conceptualize how fragile one's state of recovery can be without having the proper supports in place to withstand this difficult transition from a life of addiction to a life of sobriety.

According to the authors, the Relapse Prevention model is composed of two layers (Larimer et al., 1999). The first layer contains things that considered immediate

determinants to relapse, such as putting oneself into high-risk situations. The second layer consists of less tangible experiences, such as urges and cravings. Using the Relapse prevention model, a client's treatment episode begins with an assessment and then a treatment plan is developed that aims at lessening the client's mental and emotional connection to the substances that trigger them.

The Relapse prevention model offers interventions to help combat a lapse or relapse from occurring (Gustafson et al., 2011; Larimer et al., 1999). These interventions are targeted and gradually increase in intensity based upon where the individual is in their relapse cycle. For example, as a person in recovery feels their lifestyle begin to become imbalanced, which is the first step to relapse, the appropriate intervention is for them to engage in activities that rebalance their lives (Larimer et al., 1999). These could be activities such as jogging or meditation. If that was not an effective intervention, and the person continues on in their relapse cycle and is demonstrating a lack of coping response, then according to Larimer et al., the appropriate interventions could consist of looking more deeply at skill acquisition, utilizing coping skills training, and utilizing assertiveness training. Should these interventions not work, and the cycle is allowed to continue, the initial use is referred to as a *lapse*, and the interventions are significantly intensified. They include committing to a *no use* contract and using reminder cards with instructions written on them. These instructions are designed to walk the individual through their urges and cravings with guidance on how to cope with their immediate situation. Should the cycle be permitted to complete, a relapse will occur. It is at this

point where Larimer et al.,(1999) say that the relapse prevention model calls for interventions such as cognitive restructuring.

Literature Review

This review of the literature covers a wide variety of resources, information, and studies that examine the Alaska Native and American Indian cultures and their use of alcohol and drugs. This literature review begins by discussing the struggles that the AN population is facing with alcohol and drug addiction. In order to better develop an understanding of Alaska and the variety of tribes that can be found throughout the state, the literature review first provides a glimpse into the demographics of the state as well as the regions of Alaska. Next, a historical perspective is provided, which delves into the use of alcohol and drugs within the AN culture. I also review literature that pertains to violence, psychological disturbances, transgenerational trauma, and epidemics that plagued these cultures. The literature review then moves into discussing how the AN culture perceives therapy, responds to therapeutic interventions, understands substance abuse therapy and the relapse cycle, and understands recovery from addiction. I also discuss obstacles that often prevent the AN population from pursuing treatment in the literature review, in addition to interventions that are found to be culturally appropriate and increase the likelihood of sobriety. The review of the literature then goes into some detail regarding traditional treatment modalities and relapse prevention techniques. I, then, end this chapter by discussing the literature on best practices for avoiding or treating addiction within the AN population.

As a result of searching the available literature, there appears to be a gap in the research regarding of how the AN population perceives alcohol, drug, and mental health treatment in comparison to medical treatment (Duran et al., 2005). For example, searching the literature showed that there does not appear to be a stigma attached to receiving medical treatment for physical health conditions amongst the AN population. However, the literature clearly demonstrates that there is a strong, negative, stigma attached to a person of AN descent seeking help for substance use related disorders or for mental health problems (Coyhis & Simonelli, 2008; Duran et al., 2005).

The literature did clearly convey that sensitivity and an acute awareness of multicultural ethics, and issues, are two of the more important factors that contribute to a successful therapeutic relationship with the AN population (LaFromboise, Trimble, & Mohatt, 1990). The individual who provides the therapy must embrace, appreciate, and respect their clients' traditional values. Typically viewed as a holistic and spiritual process, counseling is often viewed as a communal activity that the whole family, and sometimes friends and neighbors, partake in (LaFromboise et al., 1990). Each participant will take on significant roles in order to assist this person in becoming better again. Some will observe the person, while others will support the family and develop reasonable explanations for their behavior. Others will come up with remedies and some others will assist in executing the remedies (LaFromboise et al., 1990).

The goal of this research is to identify the predictive factors of treatment completion for the AN population. Some research suggests that the use of AN traditions and specific cultural techniques, when interwoven with effective treatment interventions,

can provide clients with the safe, comfortable, and culturally sensitive environment they crave when attempting to address and overcome these issues (Morgan & Freeman, 2009). An example of this is the use of the "Talking Circle." According to Morgan and Freeman (2009), in the circle, all participants are respected and everyone is given an equal opportunity to participate. This is a deeply valued method of traditional healing amongst the AN population.

Addiction in the Alaska Native and American Indian Populations

Addiction issues, poor health, and a lack of available services to increase health and wellness are global problems that affect all ethnic populations (Doshi & Jiles, 2006). However, according to the literature, the AN and AI populations have weathered significant struggles with deadly addictions to alcohol and other substances (Chong & Lopez, 2007; Doshi & Jiles, 2006; Feldstein et al, 2006; Hawkins et al., 2004; Malcolm et al., 2006; Namyniuk et al., 2001; Young & Joe, 2009). The prevalence of incidences of alcoholism, addiction, and substance use-related arrests involving AN women are also considerably high with rates that are often many times more than the national average (Chong & Lopez, 2007; Doshi & Jiles, 2006). The details of these incidences, such as demographics, economic status, level of education, English fluency, and drug of choice, vary between the numerous rural AN villages (Young & Joe, 2009). Nonetheless, decades of frequent substance-related interactions with the legal system indicate that substance misuse is a problem that deeply impacts AN adults and their families. The problematic consequences created by substance use, and the powerful impact it has on the AN population, are spread statewide throughout Alaska. While drug and alcohol

treatment centers work to improve the services that they offer to both their Native and non-Native clients, it is imperative to identify how the AN cultures perceive recovery and what methods of treating substance use disorders are most effective when working with AN clients (Mohatt, Rasmus, Thomas, Allen, Hazel, & Marlatt, 2008; Schacht & White, 2003).

A Historical Perspective

The AN culture has had long standing problems stemming from the over use of alcohol (Spillane & Smith, 2007). According to the research, this over use has resulted in unfortunate health issues, such as cirrhosis, diabetes, increased death rates, higher rates of suicide and homicide, and an increase occurrence of prenatal abnormalities and miscarriages (Spillane & Smith, 2007). However, the overuse of alcohol in the AN culture, and that subsequent effects of the misuse of substances, is not the only problem. According to Spillane & Smith (2007), another piece of the problem also lies in the lack of research that exists in area of risk factors that pertain specifically to this population. The way history has been passed down from one generation to the next also merits some attention. Within the AN culture it is important to point out that much of the history that was passed down through verbal heritage and through literature which is often composed by non-AN populations. Therefore their story, as well as the tales of what has happened within this population, particularly regarding their drinking habits, to put them at such a high risk of abusing substances is still sorely inaccurate.

The use of alcohol, other substances, or hallucinogens has been long intertwined into the AN culture as these items were used as critical pieces of ceremonies or healing

traditions. The use of alcohol and other substances, in relation to traditional ceremonies, has strict boundaries and protocols for use (Taylor, 2000). The limitations that were put into place, regarding the way these substances were to be utilized, would have likely been enough to protect these cultures from suffering the trials and tribulations of addiction.

Unfortunately, despite the limitations, substance misuse is a deep rooted problem within the AN culture, dating back generations (Morgan & Freeman, 2009; Young & Joe, 2009). Drug abuse and alcoholism within the AN populations has been a topic of many research studies over the past several decades; however, there is still much left to be discovered (Young & Joe, 2009). One fact that has been established through the decades of research is that the AN population dies at a much higher rate, due to substance misuse, than any other ethnicity (Young & Joe, 2009). These deep rooted problems appear to date back to when the Spanish and European settlers arrived in American and began to introduce the concept of including alcohol and other substances as a regular part of the daily diet (Taylor, 2000). Eventually, attitudes against alcohol and other substances began to change and the culture became more accepting of regular and consistent use of substances, including alcohol, and intoxication became normalized (Taylor, 2000). Additionally, the settlers introduced the concept of bartering with alcohol and drugs (Taylor, 2000). This made substances more readily available to the AN population.

Historically, research shows that the AN population has demonstrated overwhelmingly high levels of mental and emotional distress (Gone, 2009; Morgan & Freeman, 2009). This population experiences more domestic violence, suicide, homicide, addiction, and psychological disturbances that any other population in the United States

(Morgan & Freeman, 2009). Dating back more than a century, AN's have fallen victim to a vicious cycle of transgenerational trauma, beginning with the Russians landing in Alaska around 1820 and reaping havoc amongst the villagers (Morgan & Freeman, 2009).

Epidemics were caused, due to the diseases carried to the area by the Russians, and entire villages were wiped away by sickness. Around 1870, the process of assimilating the AN population began. They were no longer allowed to speak their native languages, were forbidden from passing on traditions, and their children were sent away to boarding schools in order to prevent them from learning the "native ways," (Morgan & Freeman, 2009). A child who attempted to partake in a "native tradition" or who attempted to speak their native language was punished terribly.

These tragic events, although they took place more than a century ago, have been passed from one generation to the next and have created an unfortunate dynamic in the AN population (Gone, 2009; Morgan & Freeman, 2009). There are feelings of unresolved anger, sadness, and confusion that have plagued this culture for decades and there seems to be no easy solution. Self-medicating, through the use of substances, was found to be a quickly remedy for the pain and often presented opportunities to unleash generations of rage, all with the excuse of being intoxicated (Morgan & Freeman, 2009).

Additionally, there have been governmental, both federal and tribal, interventions attempted over the decades in order to control the possession and distribution of alcohol (Young & Joe, 2009). In 1832, the Indian Intercourse Act was established in an effort put forth by the federal government to try and control the sales, possession, and use of

alcohol by the AN population. Although this policy was in place until 1953, when the AN population earned the right to purchase alcohol and drink in bars, the rates of alcohol and drug use, and death from the misuse of alcohol and drugs, continually increased within the AN populations (Coyhis & Simonelli, 2008; Young & Joe, 2009). Later, in 1986, the Indian Alcohol and Substance Abuse Prevention and Treatment Act was established. Essentially, this act initiated the "war on drugs" in the tribal regions (Young & Joe, 2009). This federal movement called for special attention to be paid to illegal drug trafficking on tribal lands and to the use of alcohol and drugs within tribes.

Dating back to the Nixon administration, there have been a variety of forces, some within AN communities and some from outside of this population, who have been a part of an ongoing movement to improve the efficacy of the substance abuse treatment delivery system for the Native communities (Novins, Aarons, Conti, Dahlke, Daw, Fickenscher, Fleming, Love, Masis, and Spicer, 2001). Tribal governments have also declared interventions in order to help the AN population become healthier and more productive. As of today, more than 50% of the tribal communities in the United States have been declared "dry," (Novins, et al., 2001; Young & Joe, 2009). A dry community means that no alcohol or drugs are allowed to be used, manufactured, purchased, or possessed on the tribal land. If anyone is found to be using, manufacturing, selling, or in possession of drugs or alcohol on dry land it is an automatic felony and the villages' tribal councils reserve the right banish individuals from the community (Young & Joe, 2009). Despite the laws and interventions put in place to discourage, and even prevent, the misuse of alcohol and drugs, the number of alcohol and drug related crimes still

continued to rise. According to the Bureau of Statistics, between 1992-2001, 62% of AN crimes, compared to 42% of the rest of the ethnic groups in the United States, involved alcohol, 9% involved drugs, and 14% involved both alcohol and drugs (Young & Joe, 2009). During the same reporting period, 40% of domestic violence crimes, involving individuals of AN descent, also involved alcohol.

In 2003, SAMHSA reported that the number of AN women that met the criteria for Alcohol Dependence, and were between the ages of 30 to 64, was more than double the numbers of Caucasian women, who were the same age, that met the same criteria. According to Young & Joe (2009), the same is true for AN women between the ages of 18 to 25. More recent data shows a dramatic and significant increase in alcohol use in AN girls between the ages of 12 to 13. This data demonstrates that AN girls, ages 12 to 13, are using alcohol more than AN and Caucasian boys their same age.

Understanding the type of drinking that the person engages in is also emphasized in the research (Novins, et al., 2001). The current literature supports that the majority of AN individuals, who meet the criteria for alcohol dependence, are also binge drinkers. Additionally, according to Young and Joe (2009), binge drinking is often a common factor in car accidents, suicides, and homicides involving individuals of AN descent.

The abuse of illegal drugs has also been a long standing problem with the AN populations (Coyhis & Simonelli, 2008). Regardless of age, the rates of use of illegal drugs in the AN population is significantly higher than the rates of use in all other ethnicities in the United States. Among the illegal drugs used, methamphetamines are

becoming a considerable problem among many tribes in the United States (Young & Joe, 2009).

The AN / AI Response to Therapy

Addressing mental health therapy with a multicultural, and sensitive, approach is important when it comes to working with these populations (Gray & Rose, 2012; LaFromboise et al., 1990). When providing therapy to the AN population it is important to recognize, embrace, and promote traditional Indian values; however, unless mental health therapy is carried out in a culturally sensitive manner, it is probable that the morals and ethics of this population will not be congruent with the intentions of the therapeutic interventions.

The AI/AN population differs from the rest of the American society when it comes to how mental health therapies and theories are perceived (Gray & Rose, 2012; LaFromboise et al., 1990). Traditionally, according to Gray and Rose (2012) the AI/AN population views mental health therapy as a spiritual and holistic process that one goes through and when the term “medicine” is used with the AI/AN population, it does not necessarily mean a substance that is consumed to in order to make you feel better. According to LaFromboise et al. (1990), medicine can also be prayer or other traditional exercises.

Additionally, an AI/AN person’s mental health and emotional wellbeing are also tied to their community's roots (Dickerson et al., 2012; LaFromboise et al., 1990). For example, if the community is having problems then each member of that community carries the burden of these problems. Likewise, if a member of the community is

functioning poorly, the entire community is affected by their person's lack of wellbeing. Many members in the community will take on significant roles in order to assist this person to become better again. Some will observe the person, while others will support the family and develop reasonable explanations for their behavior. Others will come up with remedies and some will assist in executing the remedies.

It has been observed in AI/AN populations that mental health issues which have manifested are contributed to weakness (LaFromboise et al., 1990). It has also been noted that mental health issues will also manifest when one is trying to avoid the required self-discipline it takes to adhere to their own cultural traditions and responsibilities (Duran et al., 2005). Many AI/AN psychologists and therapists will only utilize a very select few diagnoses when working with this population. This is because of the belief that mental health issues are better dealt with through traditional and spiritual methods (Duran et al., 2005; LaFromboise et al., 1990). However, according to LaFromboise et al. (1990), when a diagnosis is given, it is typically one of the following: depression, anxiety, adjustment reaction, or psychoses.

When mental health issues have been identified, and are being dealt with, ceremonies are often held and it is typical that the person's "therapy" would consist of interventions that are not only carried out through clinical counseling, but also involve the family and key members of the tribe (Dickerson et al., 2012; Gray & Rose, 2012; LaFromboise et al., 1990). Rituals are prepared and performed by medicine men, and women, and the body, and soul, of the person is cleansed and restored to wholeness. As LaFromboise et al. (1990) states, when mental health is properly managed through

culturally sensitive methods, religion, physiology, and psychology intertwine and each play vital and important roles in creating wholeness within a person and within a community.

Substance Abuse Treatment and Relapse

Understanding the barriers and obstacles that the AN population faces in their decision, or attempts, to access help for their substance use disorders is critical. However, it is also imperative to have a thorough understanding of the treatment that is typically offered for substance misuse. This includes how the length and intensity of treatment is determined, and how to handle and prevent relapse.

In order to determine whether or not an individual meets the criteria for a drug or alcohol problem, and requires treatment, an assessment is performed. This is a face-to-face interview between the identified client and the assessor, who is a credentialed substance abuse and mental health professional. Through a series of questions and discussions the assessor determines whether or not the client is abusing, or is chemically dependent on, a substance and determines the need for treatment according to the criteria set forth by the DSM 5 (APA, 2013) and the ASAM (2001).

For example, alcohol use disorder, according to the DSM 5 (APA, 2013), has been identified as the development of a problematic pattern of the use of alcohol that significantly impairs a person's ability to function. Individuals must meet at least two criteria is a 12-month period and the criteria consist of the following: (a) drinking more or for longer than intended; (b) consistent desire to control or decrease use; (c) spending a large amount of time trying to get alcohol; (d) experiencing cravings; (e) continuing to

use despite having negative consequences; (f) continuing to use despite persistent home and/or social problems; (g) having to give up important activities due to the use of the alcohol; (h) repeatedly using alcohol when it is physically dangerous to do so; (i) continuing to use alcohol despite the negative impacts that it has on the body; (j) a demonstration of tolerance; (k) or lastly a demonstration of withdrawal (APA, 2013, pp. 497-503).

Once it has determined that a client meets the diagnostic criteria for alcohol use disorder, the next step is to determine the intensity of treatment that will be necessary to assist them in overcoming their disorder. There are a variety of intensities of treatment available for working with alcohol dependence; however in terms of pharmacological interventions the two drugs that are most commonly used are Naltrexone and Acamprosate (Inaba & Cohen, 2004; McDonough, 2007; Oslin, Berrettini, & O'Brien, 2006). According to McDonough (2007) and Oslin et al. (2006), both Naltrexone and Acamprosate work by decreasing the client's craving for alcohol; thus making it more manageable to control relapses. Naltrexone, which is available orally and as an injection, is an opioid antagonist and actively assists in controlling cravings, allows the client to cut back on drinking, and decreases the amount of alcohol that is consumed when the client drinks (Inaba & Cohen, 2004). McDonough reports that Acamprosate reduces cravings and has been effective assisting clients to achieve as much as six months of sobriety.

According to McDonough (2007) Acamprosate is an effective method for treating alcohol dependence; however getting clients to consistently take their medication can be a daunting task. According to the author the client must actively make the decision, each

day, between taking their medication and drinking. This decision often leads a client to relapse. Oslin et al. (2006) stated that Naltrexone worked by decreasing the rewards that the client received from drinking alcohol. Naltrexone and Acamprosate, according to McDonough, work to break the positive relationships and correlations that individuals, who meet the criteria for alcohol dependence, have developed.

Other forms of treatment for alcohol dependence include outpatient or residential treatment programming (ASAM, 2001). Outpatient treatment, according to the ASAM, begins at Level 0.5: Early Intervention. Early intervention is a form of treatment for clients who have identified that they may be in danger of developing an alcohol misuse disorder; however they do not meet the criteria to be diagnosed with one.

Level I.0: Outpatient Treatment is the next level of care that is defined by the ASAM (2001). Level I.0 treatment can be delivered in several ways. Typically, a Level I.0 treatment program consists of seven hours of treatment per week. This includes approximately six hours of group counseling and one hour of individual counseling every week. These services focus on evaluation, recovery processes, and treatment. During Level I.0 the goal is to assist the client in developing the tools and skills necessary to make permanent changes in their life.

The ASAM (2001) defines the next level of care as Level II: Intensive Outpatient Treatment/ Partial Hospitalization. This level of care provides the client with a very structured environment where the client can expect to have treatment activities in the morning, afternoon, and evening. In some cases, according to the ASAM (2001), the client can be prepared to be in treatment before and after they go to work or school, and

even on the weekends. Programs that offer Level II treatment must also be capable of offering case management, crisis intervention, medication management, and access to a psychiatrist.

Residential Treatment is the next level of intensity of treatment after Outpatient Treatment. According to the ASAM (2001), Level III: Residential Treatment includes the following intensities: Level III.1: Clinically Managed Low- Intensity Residential Treatment; Level III.3: Clinically Managed Medium- Intensity Residential Treatment; Level III.5: Clinically Managed High- Intensity Residential Treatment; and Level III.7: Medically Monitored Inpatient Treatment. The purpose of the different levels of care under the umbrella of residential treatment is to offer clients the exact type of treatment that they need, according to the ASAM. A program that falls under a Level III is a 24 hour a day, live in facility, which is extremely structured. All groups and individual sessions are offered on site and all activities are focused on recovery skills.

The highest level of treatment is Level IV: Medically Managed Intensive Inpatient Treatment (ASAM, 2001). This level of care is an acute care setting that is staffed 24 hours a day by physicians, psychiatrists, and clinicians. These clients have around the clock access to nursing staff, access to psychiatric care, and their biomedical conditions will be attended too.

Perception of Recovery

Current literature demonstrates the AN perception of the recovery model (Mohatt et al., 2008). This description appeared to be a different conceptualization of how to achieve lifelong sobriety versus how traditional urban treatment centers, and non-Native

providers, typically view this process. Mohatt et al. (2008) described a process that begins with a problem, such as drugs or alcohol. The process of recovery moves circular into the next phase, which is where the individual thinks about their problem. This is not necessarily a fast moving process and that the phase of thinking about their problem may take several years (Mohatt et al., 2008). At some point, because of thinking about their problem, the individual makes a decision to experiment with some type of sobriety; however, this part of the progression often results in repeated relapses that cause the process to start over, from the very beginning, with identifying the problem. At some point in the process of achieving sobriety, the individual will begin to again experiment with sobriety and will reach a turning point that results in, what Mohatt et al. (2008) refers to as, the first stage of sobriety. During the first stage of sobriety, the individual is refraining from using any drugs or alcohol and is making fruitful and active efforts to maintain their sobriety. As this part of the process progresses, the individual eventually reaches the second stage of their sobriety, where they have come to value and appreciate a sober lifestyle and want to continue on this path of lifelong abstinence.

According to Parks, Hesselbrock, Hesselbrock, and Segal (2003), the AN population faces obstacles that are not only unique to their population, but that are also gender specific. For example, AN women are less likely than men to seek treatment recovery services to recover from a substance use problem and are more likely than men to seek medical help through the use of an Emergency Room or by way of mental health therapy. Unfortunately, when AN women choose to seek medical help, or mental health therapy, instead of taking a direct approach to receiving treatment for a substance use

disorder, their addiction issues are often overlooked, downplayed, or viewed as a byproduct of a medical or mental health problem. According to Parks et al. (2003), this is due to an overwhelming fear of being stigmatized and recurrence of self-defeating feelings of guilt, worthlessness, and shame. Additionally, AN women are typically more fearful of losing custody of their children because of admitting that they have a substance use problem or because of having to leave their families and admit themselves into a residential treatment center.

Furthermore, there is a significant amount of existing literature that demonstrates a clear correlation between the use of substances and interactions with the legal system (Feldstein et al., 2006). These interactions with the legal system often include public drunkenness, driving while intoxicated (DWI), or assault and theft committed while under the influence of alcohol or drugs. Generally, when an addict is arrested and serves their sentence, they are not receiving the treatment recovery services that they desperately need. However, when not arrested due to a substance-related offense, AN men are more likely than AN women to directly confront their addiction issues and seek treatment recovery services in order to overcome their substance addiction problems. Additionally, the criminal justice system is more likely to mandate treatment services for an AN men, than an AN women (Feldstein et al., 2006; Parks et al., 2003).

Other obstacles that are faced by the AN population include the fact that substance use frequently starts very early in life, with inhalants often being the first drug of choice for AN youth, and the lack of readily available treatment services (Aguilera & Plasencia, 2005; Hawkins et al., 2004). Furthermore, in rural areas there may not be a

qualified substance abuse treatment professional available to provide services and any medical, mental health, or treatment services that are available may only be accessible by airplane, snow machine, or boat. Due to the increasing costs of fuel, these forms of transportation can become quite costly or completely unaffordable (Parks et al., 2003).

Obstacles in Pursuing Treatment

It is clear, according to the current literature, that there is a desperate need to develop a better understanding of how the AN populations perceive alcohol, drug, and mental health treatment in comparison to medical treatment (Duran, et al., 2005). Services, such as treatment programs that address substance use disorders or mental health problems, appear to be sorely underutilized by the AN populations. According to Duran et al. (2005), one study revealed that out of 582 American Indians, who belonged to a southwestern tribe, 85% reported experiencing at least one substance use disorder or mental health disorder in their lifetime; however, of that 85%, only 55% had made any attempt to access treatment services. Further investigation revealed that the 55% of American Indians who had made attempts to access treatment services, for their substance use or mental health problems, the majority were men. However, although men were more likely to seek residential treatment services for substance use problems, the women who had made attempts to access treatment services were more likely to have sought treatment for mental health problems (Duran et al., 2005).

Historically, culturally-appropriate means for treating the substance use and mental health needs of the AN population. It appears as though there are issues that arise which prevent, or discourage the AN population from seeking treatment for substance use

or mental health problems. According to the current literature, it seems likely that the issues, which are brought forward as reasons for the AN population to avoid seeking treatment services, are culturally specific (Duran et al., 2005; Oetzel et al., 2006).

As substance use became more prevalent and problematic for this culture, typical interventions, such as talk therapy, direct confrontation of maladaptive behaviors, and treatment in group settings, where put into place in an effort to assist this population in overcoming their struggles with substances and mental health (Dana, 2000; Gone, 2009). Unfortunately, these interventions, although widely used and often highly effective for many Americans, were not effective for the AN population. Interventions, such as direct confrontation and traditional talk therapy have been found to be counterintuitive to the therapeutic process for the AN population.

Treatment providers who work with this population, but are not competent to do so, have misdiagnosed these individuals, created a fear of seeking help, and have dramatized the stigmatization that is often attached to those who try to find help for a substance use or mental health disorder (Dana, 2000). When traditional therapeutic interventions are put into place, the individual's response to the interventions may be misunderstood. For example, a common assessment question that could be misinterpreted, due to the cultural beliefs of many AN tribes, is when the client is asked whether or not they ever see or hear things that others cannot. Many individuals of AN descent will answer this question affirmatively and, if the therapist is not culturally competent, their answer could be potentially misinterpreted to mean that they experience hallucinations (Dana, 2000). Additionally, the literature identifies four primary obstacles

that interfere with the AN population's pursuit of treatment recovery services (Duran et al., 2005; Oetzel et al., 2006). These four obstacles consist of self-reliance, privacy, quality of care, and trust.

It is indicated that the obstacles of self-reliance and quality of care are more commonly reported by the AN populations when treatment recovery services are being sought, versus when this population is seeking mental health or medical treatment (Duran et al., 2005; Oetzel et al., 2006). Quality of care is defined as the availability of the treatment services and the efficacy and effectiveness of the treatment program (Duran et al., 2005; Oetzel et al., 2006). Additionally, self-reliance describes the inherent desire to not rely on others for help or assistance. According to Oetzel et al. (2006), these findings are consistent with the current literature and accurately depict the concerns of the AN population when a substance use problem persists.

Culturally Appropriate Interventions

Morgan and Freeman (2009) suggest that there are several effective ways to introduce the AN population to treatment for their substance use and mental health disorders. A talking circle, for example, can be used in a variety of settings and can be facilitated many different ways. Some traditional talking circles begin, and end, with a prayer, while others do not. Smudging, the burning of sage in order to cleanse an environment or a person, is a traditional technique commonly used when beginning a group. The circle does have a leader, someone of respect, but the leader does not take on the role of a "problem solver." The leader of the talking circle will not attempt to find solutions to everyone's problems, but will instead set the tone of the circle and establish

safety and trust (Morgan & Freeman, 2009). In the circle, all participants are respected and everyone is given an equal opportunity to participate. This is a deeply valued method of traditional healing amongst the AN population. Furthermore, there have been many instances where a client of AN descent shows little to no engagement in a treatment setting that does not practice culture techniques; however, when the AN client is placed in a culturally sensitive treatment setting, they are actively engaged in their treatment (Morgan & Freeman, 2009). Additionally, when a treatment facility embraces cultural traditions, the treatment provider can assist the client in developing a way to embrace their culture without the use of substances (Dickerson et al., 2012; Gray & Rose, 2012). For example, the treatment provider can introduce the client to traditional ceremonies, native activities, and gatherings where there is no use of alcohol or drugs.

In terms of preventing substance misuse from beginning, it is important to target AN youth (Aguilera & Plasencia, 2005; Hawkins et al., 2004). It is suggested that this could be done by implementing afterschool programs, developing partnerships between parents, schools, and community resources, and by an increased use of screenings (Aguilera & Plasencia, 2005; Hawkins et al., 2004). This allows for the risky behaviors of youth and adolescents to be targeted before addictions develop or become so overwhelming that an outpatient or residential level of intervention is required (Aguilera & Plasencia, 2005; Hawkins et al., 2004).

Treatment Modalities

There are many different methods of treating alcohol dependence. Some of the most effective methods available include client- centered counseling, behaviorism,

rational- emotive therapy, reality therapy, cognitive- behavioral therapy, gestalt therapy, and transactional analysis (Little, 1997; Little, Robinson, & Burnette, 1998). These treatment modalities are collectively used to teach specific skills such as healthy coping skills, relapse prevention, relationship building, anger management, and stress management (Mooney et al., 1992).

One particularly useful treatment intervention is moral reconation therapy (MRT) (Little & Robinson, 2006). According to Little and Robinson MRT is a treatment intervention that utilizes cognitive behavioral therapy to enhance self- image, identify appropriate behaviors, and develop and enhance a client's ability to use moral reasoning. According to the authors, clients who participate in, and successfully complete, MRT demonstrate a lower recidivism rate because of their ability to make better decisions, use higher levels of moral reasoning, and their increased self-esteem. There are 12 steps in MRT; however they are not related to the 12 steps of Alcoholics Anonymous. According to Little and Robinson, the virtues that are addressed in the 12 MRT steps are: a) honesty, b) trust, c) acceptance, d) raising awareness, e) healing damaged relationships, f) helping others, g) short term goals & consistency, h) commitment to change, i) maintaining positive change, j) keeping moral commitments, and k) choosing moral goals. There are additional MRT steps, steps 13 through 16, and those goals address evaluating the relationship between the inner self and personality

Relapse Prevention

According to Larimer et al. (1999), relapse prevention includes being able to identify high- risk situations, utilizing healthy coping skills, developing realistic

expectations, managing cravings, recognizing warning signs, and identifying the relapse cycle. Relapse prevention, according to Larimer et al., is a process that includes experiencing a high risk situation, choosing an effective coping skill rather than an ineffective one, increasing one's own self-efficacy, and ultimately lowering the likelihood of relapse.

In order to effectively assist the AN population in decreasing the prevalence of relapse it is crucial to identify and address the prominent, and commonly occurring, factors contributing to this population's high relapse rates (Chong & Lopez, 2007). According to Chong and Lopez (2007), the recovery, and living, environment of AN women is a strong determining factor when attempting to either predict relapse or plan to prevent relapse. For example, common triggers for relapse include domestic violence, homelessness, low self-esteem, trauma, a lack of sober social supports, and unhealthy family relationships. Therefore, when an AN woman receives treatment for her substance use issues, and she returns home, examining her living and recovery environment is very important in her relapse prevention planning process (Chong & Lopez, 2007; Larimer et al., 1999). If surrounded by violence, trauma, sick relationships, and others who may still be using alcohol or drugs, the AN woman is entering into a situation that will likely lead to relapse if the proper tools, plans, and precautions are not in place to provide her with adequate support.

Treatment Provided at the Non-profit Agency

The non-profit agency where the archival data was collected utilizes only curricula that are SAMHSA-approved evidenced-based practices (EBP). EBPs are

developed through the integration of clinical expertise, research, and the identified values of the target population (Duke University, 2015; SAMHSA, 2015). This agency provides treatment activities that incorporate evidence-based curricula and a cognitive behavioral therapy approach to treating chemical dependency and abuse. Focusing on decision making, communication skills, problem solving, goal setting and impulse control, relapse prevention, family reunification, parenting, and healthy relationships. A heavy emphasis is placed on developing safe and sober support systems with the clients' families, friends, their work environments, and social/recreational activities and interests that supplant the focus on using substances.

The agency's treatment programs feature a combination of individual and group therapy. These groups and individual sessions may include family therapy, anger management, gender specific treatment programming, relapse prevention, MRT, trauma-focused curricula, and culturally-specific treatment activities. The type and intensity of services are determined by the assessment process, which results in a treatment plan that addresses any identified areas of concern.

This study only examined the archival data from outpatient programs. These programs provide ASAM Level I.0 and Level II.1 treatment. Level I.0: Outpatient Treatment is the next level of care that is defined by the ASAM (2001). Level I.0 treatment can be delivered several ways. Generally, a Level I.0 treatment program consists of seven hours of treatment per week for about 10 weeks. This includes approximately six hours of group counseling and one hour of individual counseling every week. These services focus on evaluation, recovery processes, and treatment. During

Level I.0 program the goal is to assist the client in getting back on track and developing the tools and skills necessary to make permanent changes in their life.

The ASAM (2001) Level II.1: Intensive outpatient treatment provides the client with a very structured environment where the client can expect to have treatment activities in the morning, afternoon, and evening. This intensity of programming is generally offered at 12 to 16 hours a week for up to 24 weeks. This level of care provides more intensive wrap-around services and requires a higher level of engagement and participation from the client.

Although many of the clients served by this agency are mandated to participate in the program, the services themselves are voluntary. The agency openly accepts legally-mandated referrals; however, the agency is not the legal entity that enforces the mandate or provides the consequence if the mandate is not followed. It is explained to the client upon intake that the decision to participate in treatment in theirs, not the agencies. The clients are reminded that they have been mandated to engage in these services by their referral source (i.e., the court system or the child protective services) and that their level of engagement and participation is regularly reported back to the entity that is mandated the treatment. It is also explained that if they make the choice to not engage in the treatment services there will likely be legal ramifications in their future.

Predictive Variables of Treatment Success for Substance Abuse

According to research conducted by Zanis, et al. (2009), studies have been conducted on the substance using population which has demonstrated that there are certain factors that appear to be linked to an increased likelihood of treatment completion.

For example, Zanis, et al. (2009) noted that when studying incarcerated individuals, the strongest predictor of success was the offender's age. The older the offender's age, the more likely they were to be successful at completing their treatment program. Additionally, it was found that length of stay was also a very strong determinant of success for this population. Other prominent predictive variables included whether or not the offender has a history of a problematic relationship with their mother, and whether or not the offender had a history of a problematic relationship with a sexual partner. Another study found, conducted with minority adolescent and early adult populations, the development of a working, therapeutic alliance and client involvement in treatment were strong predictors of successful treatment completion (Cordaro, Tubman, Wagner, & Morris, 2012).

This study is looking primarily at identifying predictive variables that lead to successful completion of the agency's outpatient treatment programs. Factors that will be examined are participants' severity of substance abuse, legal involvement, depression, social support, and socio-cultural variables such as ethnicity, age, gender, and mandated/voluntary treatment enrollment.

Adverse Childhood Experiences

Adverse Childhood Experiences (ACEs) have been well researched and have a strong correlation with behavioral issues and high-risk behaviors in adulthood (Campbell et al., 2016). ACEs consist of any form or combination of sexual, physical, or psychological trauma inflicted on a child. Additionally, substance abuse in the home, mental illnesses, and other forms of violence can also contribute to adverse experiences

in a child's life. According to Liu, Yang, Shi, Liu, and Wang (2016), childhood abuse is a strong, significant risk factor that often leads to alcohol dependency in adults. According to the research conducted by Liu et al. (2016), an adult who has experienced five or more ACEs is 7 to 10 times more likely to develop a drug or alcohol dependency. However, in Alaska, it has been determined that individuals who report experiencing three or more ACEs are significantly more likely to also experience medical, mental health, or substance abuse issues (SOA, 2011).

Kaiser performed the original ACEs studies and determined a direct link between traumatic experiences in a child's life and premature death, an increased likelihood of co-occurring disorders (Campbell et al., 2016; Liu et al., 2016). The researchers also noted that Kaiser similarly established a connection between ACEs and an increased risk of cancer, heart disease, stroke, diabetes, and lung disorders (Campbell et al., 2016; Liu et al., 2016; SOA, 2011). Liu et al. (2016), also discussed the connection between ACEs and suicidality. This is likely due to the experience of ACEs causing permanent damage to sensitive, under-developed areas of the brain that lead to a diminished ability to perform executive functioning in adults.

Depression and Substance Use

There is a long history of research that depicts an association between substance use and depression (Satre, Leibowitz, Sterling, Lu, Travis, & Weisner, 2016). Depression is a complicated mental health issue and it often makes treatment for substance misuse much more difficult (Grattan, Sullivan, Saunders, Campbell, & Von Korff, 2012). The strong correlation between substances, such as alcohol, and depression

has been determined to negatively impact a person's attempts to recover from addiction (Satre et al., 2016). Furthermore, according to the research, a pre-existing diagnosis of depression increases the likelihood of developing a dependency on substances.

Legal Activity and Substance Use

The use of substances, such as alcohol or marijuana, often impairs decision making abilities, as well as a person's ability to accurately recall information (Van Oorsouw, Mercklebach, & Smeets, 2015). Even an insignificant about of substances introduced into the body has the potential to cause "grayouts," where memories become foggy and recent situations are hard to recall. According to Van Oorsouw et al., the greater the amount of substances consumed, the more likely it is that blackouts will occur, which is when a person is completely unable to recall periods of time (2015). Many individuals who suffer from a substance use disorder, and also have a history of engaged in illegal activities, often engage in these crimes while under the influence.

Social Support and Substance Use

Research has demonstrated that there is a very strong correlation between treatment for substance use and a client having a social support system in place (Mendoza, Perry, Derrick, Nochajski, & Farrell, 2015). The research also suggests that social support systems provide help to a person who is seeking recovery through providing comfort, advice, and establishing a relationship with an individual who understands and care about the client's journey to sobriety (Mendoza et al., 2015). There are barriers to developing a social support network. According to Mendoza et al., substance users who have been victimized in the past may have difficulty opening

themselves up to be vulnerable again. Additionally, the idea of social support is often misperceived as lecturing and critiquing; therefore, reluctance is a typical "first reaction" by an addict was is encouraged to establish and reach out to a peer support network. Mendoza et al. (2015) asserts that once an individual is able to understand the sympathy, understanding, and the discovery of commonalities amongst peers, idea of social support becomes much warmer and the comradery of a social support network evolves into a staple.

Length of Stay and Substance Use Treatment

Although there has been very little research on the correlation between length of stay and the successful completion of a drug treatment program, Zarkin, Dunlap, Bray, and Wechsberg (2002), assert that length of stay is strong predictor of success in drug and alcohol treatment programs. The literature also discusses the correlation between the amount of time an individual remains in treatment and the increased likelihood for post-completion long-term sobriety. Furthermore, the research demonstrates that there is a significantly higher rate of employment, post-completion, for those who participate in longer treatment programs (Zarkin et al., 2002). The researchers discuss how the literal length of a drug treatment program may not be the only determining factor that leads to success; rather, it may also be the completion of the treatment regimen that was planned based on the specific needs of the client (Zarkin et al., 2002).

Ethnicity and Substance Use

There is a demonstrated relationship between drug use and ethnicity. An example of this can be found in the research facilitated by Marsiglia, Kulis, Hecht, and Sills

(2004). Their study examined several ethnicities and showed that when looking at Whites, African-Americans, and Hispanics, it is the Hispanic culture that exhibits the highest rate of licit and illicit drug use. The group's research also addresses how significant differences can be found when examining whether an individual lives in a rural area versus an urban area (Marsiglia et al., 2004). However, Marsiglia et al. (2004) asserts a caution. They stress the importance of examining all factors that could contribute to one's substance use patterns as to not further reinforce prejudices and stereotypes that are root in ethnicity.

Mandated Treatment

Clients enter into substance use treatment programs for a variety of reasons. However, many individuals who enter into treatment programs are court ordered, or legally mandated, to do so (Wild, Yuan, Rush, & Urbanoski, 2016). Legally mandating someone to participate in a drug and alcohol treatment program is a tool to create leverage and garnish compliance. Endorsed by the US National Institute on Drug Abuse, mandated treatment has shown to be cost-effective and beneficial to a client's recovery process (Wild et al., 2016). Although a legal mandate gets the client into a treatment program, and encourages them to stay, how well the client engages in their program and their ability to maintain sobriety post-treatment completion is dependent on other factors. According to Wild et al. (2016), cognitive involvement and commitment to the program are the two major factors that determine long-term success when it comes to clients who engage in treatment only due to a legal mandate.

The anticipation is that the outcomes of this study will contribute to the research community by identifying, for the AN and White populations, predictive variables to successfully completing outpatient substance abuse treatment programs. The identification of these predictive variables will also provide the agency with the opportunity to examine the areas of their programs where they could strengthen their provision of services.

Summary

Based on the review of the literature, there is still a persistent gap when it comes to developing a thorough understanding of how the AN population responds to treatment. The gap is specific to treatment programming that is facilitated in urban settings, specifically when the individuals receiving the treatment services are from rural regions of the state. This study aimed to begin closing that gap by analyzing the data of a nonprofit treatment provider and comparing the results of the CSR to measure the clients' progress during their treatment episode. The intention was for this analysis to allow for themes to surface, thus allowing the treatment provider to enhance their program to meet the very specific needs of the clientele that they are serving.

Chapter 3 presents the research methods used in this study, and include a thorough description of the CSR and AST, as well as a description of the research questions and hypothesis. Chapter 3 also provides an overview of the sampling procedures and the data analysis methodology that will be used. Next, Chapter 4 provides a review of the findings, and a further examination of the study's hypothesis. Finally, a follow-up with a discussion of the study's findings are presented in Chapter 5.

Chapter 3: Research Method

Introduction

This study attempted to address the problem of inadequate knowledge on the factors that contribute to successful mandated alcohol and drug treatment completion for rural AN populations (Feldstein et al., 2006; Malcolm et al., 2006; Namyniuk et al., 2001; Schacht & White, 2003). This quantitative study serves the purpose of identifying factors that contribute to successful treatment discharges among AN clients who received treatment for substance abuse at a treatment center in Alaska. By understanding what factors contribute to successful treatment completion, treatment providers will gain useful information that has the potential to be applied in treatment to set their clients up for successful attempts at maintaining sobriety.

This chapter describes the study's research methodology, the research questions and hypotheses, sampling strategy and size, as well as the participants, a narrative of data collection and analysis, the role of the researcher, and any ethical considerations. An overview of the study's research design is discussed, as well as the rationale for choosing this research design. Also in this chapter, the data's characteristics, sample size, data collection process and analysis is presented.

Research Design and Rationale

A cross-sectional, quantitative research design was utilized (Frankfort-Nachmias & Nachmias, 2008). By utilizing a cross-sectional research design the variables were not be controlled. Instead, the archival data was gathered and analyzed to assess any relationships that may have been existent between the independent and dependent

variables. Typically, a cross-sectional research design is derived from information that is gathered through survey research. The data for this project was gathered through the use of archival data on 288 clients. It was intended that the results of the analyses would allow for the identification of specific factors related to successful treatment completion. Knowing about these factors may assist in the identification of the areas in which treatment programs could potentially improve the quality of their services (McHugh, 2003).

Research Question and Hypotheses

This quantitative study served the purpose of comparing several factors that contribute to successful treatment discharge among clients who received treatment for substance abuse at a treatment center in Alaska. The dependent variable was treatment discharge (successful/unsuccessful). The independent variables included adverse experiences, depression levels, severity of substance abuse, social support, ethnicity, age, gender, and mandated/voluntary enrollment. A more thorough description of these variables is provided in the instruments of data collection section.

The research question as well as the null and alternative hypothesis that guided the study is provided below.

Research Question 1: Do adverse experiences, depression levels, social support, substance abuse, and sociocultural variables (ethnicity, age, gender, and mandatory/voluntary treatment enrollment) predict successful discharge in outpatient treatment for substance abuse?

$H_0$1: Adverse experiences, depression levels, social support, substance abuse, and sociocultural variables (ethnicity, age, gender, and mandatory/voluntary treatment enrollment) will statistically significantly predict successful treatment discharge.

$H_1$1: Adverse experiences, depression levels, social support, substance abuse, and sociocultural variables (ethnicity, age, gender, and mandatory/voluntary treatment enrollment) will not statistically significantly predict successful treatment discharge. This hypothesis was tested using logistic regression.

Methodology

Population

The purpose of this study was to identify factors that contribute to, and predict, successful treatment discharge among AN clients who received treatment for substance abuse at an urban treatment center in Alaska. This population consists of those who were diagnosed with a substance use disorder and either voluntarily or mandatorily participated in outpatient treatment in an urban area. Through the use of the archived data, the project analyzed information collected on 288 outpatient clients. A power analysis conducted with the G*Power 3.1.5 software indicated that 288 is above the number of participants based on the study's characteristics and specific hypotheses (Faul, Erdfelder, Lang, & Buchner, 2007). The parameters to calculate the number of participants (n) at: a medium effect size (f_x) of .15, an error probability (α) of .05, and a power of .95 indicated that 176 participants were needed to test the hypotheses proposed.

Sampling Procedures

A convenience sample was used in this study (Frankfort-Nachmias & Nachmias, 2008). The sample was provided in the form of Microsoft Excel spreadsheets that are exported from a SOA information management system called AKAIMS (SOA, 2011) and included the same variables for the entire sample.

Archival Data and Setting

This quantitative study's sample of participants were based on de-identified archival data from a non-profit organization in Anchorage, Alaska. The data set that was used in this study was collected from July 1, 2011 through June 30, 2013. Originally, founded over 40 years ago by locals as a means to better the life of Alaskans, the company provides a wide variety of residential and outpatient behavioral health and prevention services throughout the State of Alaska. In order to gain access to the archived data set, the Dissertation Committee Chair, Dr. Susana Verdinelli, requested and received IRB approval. Then a Data Use Agreement form was signed between this student, the Chief Clinical Officer, and the Chief Executive Officer of the nonprofit agency. That form was submitted to Dr. Verdinelli on November 11th, 2013.

The nonprofit agency's Senior Program Assistant worked with the researcher in order to retrieve the data needed from AKAIMS for this project. The researcher met with the Senior Program Assistant on a weekly basis while the data was being retrieved to discuss the project and the goals of the research. This was to ensure that the data being pulled is adequate. During these meetings, the Senior Program Assistant discussed with the researcher where the data could be found in the AKAIMS system and if the requests from the research were realistic and achievable. If that was determined to be accurate, the

Senior Program Assistant then utilized the AKAIMS Reports Manager in order to pull the information out of the database. These reports were then sent to the researcher to be reviewed. Once the researcher was confident that the data met the project's needs, the information was sent on to the Chair for review and approval.

Psychological Services Provided at this Setting

The SUD treatment services are organized and categorized according to the ASAM LOC (2001). This nonprofit organization offers ASAM LOC 0.5 Early Intervention Services, I.0 Outpatient Treatment, and II.1 Intensive Outpatient Treatment, II.5 Partial Hospitalization, as well as ASAM LOC III.3 Clinically-Managed Medium Intensity Residential Treatment and ASAM LOC III.5 Clinically-Managed Medium/High Intensity Residential Treatment. In addition to these programs, the agency also provides SUD, as well as integrated assessments in communities throughout the state.

This agency also provides mental health services, which include evaluation, case management services, individual and group therapy, and psychiatric services for children and adults. Behavioral health associates (BHA's) deliver a wide range of case management and rehabilitative services to clients who meet specific diagnostic criteria and are identified as being a child affected with a severe emotional disturbance (youth) or an adult who suffers from a severe mental illness (adults). The mental health clinicians are embedded within the SUD programs, which assists in removing barriers to accessing care. By embedding the clinicians within the SUD programs it also enables the clinicians to be more easily integrated into the treatment teams of clients who are dually diagnosed with both a mental health diagnosis and an SUD.

The agency also offers a transitional housing program, in Anchorage and Ketchikan, to individuals who are recovering from an SUD. The transitional housing program is a two-year long program that consists of four apartment buildings, which include 18 housing units. As a part of the transitional housing program, individuals and their families receive coordinated case management services. These services include developing and updating a case management treatment plan that is designed to support their self-sufficiency by assisting them in gaining and maintaining employment, adequate housing for when the transition away from the program, and ongoing abstinence.

Through the use of the archival data, this project analyzed information on 288 clients. These were clients who participated in outpatient treatment services at this non-profit agency. Their treatment episodes began with an initial assessment. This assessment was conducted by a certified drug and alcohol counselor who met with the client and asked a series of questions in order to determine the client's history and severity of use. At this point, the counselor diagnoses the client and determines the level of intensity of treatment programming that is most appropriate and least restrictive for the individual.

Once the client is placed into their designated level of care they meet with their assigned counselor and complete the intake process. This includes formulating a mutually agreed upon treatment plan and deciding on which group counseling sessions best address the client's areas of concern, as identified in the assessment. Typically, most clients are assigned to attend relapse prevention, thinking errors, and coping skills groups; these are in addition to groups that assist in developing skills that pertain to building healthy relationships and dealing with other emotions, such as anger.

The outpatient programs generally last 12 weeks; however, they can last up to 24 weeks. The length of the program is based on each individual's need and factors like attendance and participation can have an effect on the length of the treatment episode. Once clients have completed their groups and a solid relapse prevention plan, which has been presented to their counselor, they are eligible to graduate from the program. Once a client is considered a graduate of the nonprofit agency, they are welcome to participate in what is referred to as "lifetime aftercare." This means that a client who is a graduate can come back to any group, at any time, and participate free of charged. The only requirement is that they are sober when they walk through the door.

Instruments of Data Collection

The data set contained various types of information: participants' demographic information, the AST scores, which is an instrument administered once per client at their time of admission (Appendix A); the CSR scores, which is an instrument administered at the time of admission and is re-administered approximately every 90 to 135 days and at the time of the client's discharge (SOA, 2011) (Appendix B); and the clinicians' assessment of successful/unsuccessful discharge. For the purpose of this study, only information collected at the time of admission was used. The data collected by the demographic questionnaire, the AST, the CSR, and the clinicians' assessment of treatment discharge will be used to measure the variables of this study. As stated above, the dependent variable will be treatment discharge (successful/unsuccessful). The independent variables included adverse experiences, depression levels, severity of

substance abuse, social support, ethnicity, age, gender, and mandated/voluntary enrollment.

Demographic Questionnaire

The demographic questionnaire contained information on participants' ethnicity (AN or White), age, gender (men/women), and type of treatment enrollment (mandated/voluntary).

Alaska Screening Tool

The AST was developed in collaboration with behavioral healthcare care providers, the Alaska Mental Health Board, the Alaska Mental Health Trust Authority, and The Division of Behavioral Health (SOA, 2011). It screens for depression, adverse experiences, fetal alcohol spectrum disorder and traumatic brain injury, other mental health, and substance use disorders. For the purpose of this study, the sections of depression, adverse experiences, and substance abuse were used.

Depression. It is measured by AST items 1-8 and each question can be responded on the number of days the respondent experienced the event. The respondent is prompted to estimate the number of days in the last 2 weeks that he or she has experienced an indicator of depression. For example, item 6 asks, "Felt bad about yourself or that you were a failure or had let yourself or your family down?" The respondent should indicate whether these events happened in the last 0-14 days. In this study, the sum of the number of days of each of these indicators were used as a measure of depression.

Adverse experiences. Adverse Experiences was measured by AST items 14-21 and each question can be responded as "yes" or "no." The client is asked to respond to

these questions thinking that these events could have happened during their lifetime. More positive responses indicate higher levels of adverse experiences suffered in their lifetime. An example of this item is "I have lived with someone who was a problem drinker or alcoholic, or who used street drugs."

Substance abuse. Substance Abuse was measured by AST items 33-37 and each question can be responded as "yes" or "no." The client is asked to respond to these questions thinking that these events could have happened in the past 12 months. More positive responses indicate higher levels of severity of substance abuse. An example of this item is "Have you missed school or work because of using alcohol, drugs, or inhalants?"

Client Status Review

The SOA (2011) created the questions on the CSR from research that was conducted on certain domains, primarily Quality of Life and Client Satisfaction, to create an instrument that is valid, reliable, comparable, available, and acceptable. Originally developed in 2001, the CSR was part of a new service system to provide better care to recipients of behavioral health services in the State of Alaska. The CSR was created to be consistent with national movements regarding the policy and planning on quality of life measurements. The Substance Abuse Mental Health Services Agency (SAMHSA) and the Center for Mental Health Service (CMHS) were in the forefront of these efforts.

According to their research, quality of life is defined being a multidimensional set of components that take into account a person's satisfaction with their own life and their general wellbeing, subjective and objective wellbeing and quality of life, and health and

functional wellbeing (Awad, 2007; SOA, 2011). As a quality of life instrument the CSR explores four main domains: health, safety, productive activity, and living with dignity. Within the living with dignity domain, the CSR explores social support. For the purpose of this study, the three items that measure social support will be used.

Social support. Social Support was measured by CSR items 16e, 16f, and 16g and each question can be responded on a seven-point Likert scale that begins with "Terrible" and ends with "Delighted." Respondents are asked to respond to the prompts thinking how they feel about each issue. One example of these items is "How much people in your life support you?"

Reliability of CSR and AST. As stated in the limitations section in chapter 1, there are no specific, published information on CSR and AST reliability. These instruments were created to be used in the clinical setting and they inform the treatment planning process. These measures provide a baseline of where the clients are currently rating themselves on different domains and aspects of their lives (Alaska, 2011). Reliability scores on the specific explored domains were calculated in the data set as part of the data analysis process.

Treatment Discharge

The dependent variable in this study was treatment discharge and it was measured by whether the treatment was successful or unsuccessful. Clinicians decide whether the client met the treatment goals or not and entered that information as part of the clients' response to treatment. The clinical setting where data were collected considers a successful completion of treatment as a combination of baseline success markers and

inclusion markers. Baseline markers include things such as abstinence, no new involvement with the legal system, stable housing, a solid sober support system, and steady employment. The inclusion markers involve the clients' definition of success and engagement in activities that the client perceives as meaningful. Thus, by considering these markers, clinicians make the assessment of whether the treatment was successful or unsuccessful.

Data Analysis

Logistic regression was used to test the research question. The research question and hypotheses are provided below.

Research Question 1: Do adverse experiences, depression levels, social support, substance abuse, and sociocultural variables (ethnicity, age, gender, and mandatory/voluntary treatment enrollment) predict successful discharge in outpatient treatment for substance abuse?

$H_0$1: Adverse experiences, depression levels, social support, substance abuse, and sociocultural variables (ethnicity, age, gender, and mandatory/voluntary treatment enrollment) will statistically significantly predict successful treatment discharge.

$H_1$1: Adverse experiences, depression levels, social support, substance abuse, and sociocultural variables (ethnicity, age, gender, and mandatory/voluntary treatment enrollment) will not statistically significantly predict successful treatment discharge.

The sociocultural factors (ethnicity, age, gender, and mandatory/voluntary treatment enrollment) and adverse experiences, depression levels, social support, and substance abuse as measured by specific items of AST and CSR are significant predictors

of successful treatment discharge. Logistic regression is used to make predictions about a dichotomous, categorical dependent or criterion variable. In this case, the categorical variable is defined as "successful discharge" and "unsuccessful discharge." All pieces of raw data, from the archival data set, were analyzed using IBM SPSS Statistics 21 for Windows.

Ethical Procedures

This dissertation project used archival data and therefore, it posed no risk to any human subjects. All data that was provided was de-identified prior to begin given to the researcher and no correlation can be made between the analyzed variables and the actual subjects. Numerical codes were assigned to each subject prior to beginning any data analysis. All data that was provided to the researcher remained secure until the completion of the study, at which time the information was given back to the nonprofit agency's staff to be destroyed.

Summary

This chapter detailed the methodology section of this dissertation research project. Specifically discussed were the purpose of the study, the research design, the variables that will be studied, and how they are connected to the research questions. Additionally, this chapter discussed the population and sample that was utilized for this project and how the collection and use of archival data took place. There was an in-depth discussion on the validity of the project, particularly of the CSR, and finally and brief description of any ethical considerations that were made for this research study.

Chapter 4: Results

Introduction

The purpose of this quantitative study was to identify the predictive factors that contributed to successful treatment discharge among AN clients who received treatment for substance abuse at a treatment center in Alaska. By understanding what factors contribute to successful treatment completion, treatment providers will gain useful information that has the potential to be applied in treatment to set their clients up for successful attempts at maintaining sobriety. Chapter 4 presents a brief overview of the research question and hypotheses, as well as a discussion regarding the data collection process. I also review the descriptive statistics, the statistical analysis findings, and a summary of the answers to the research question.

Research Tools

Two tools were used to gather the data for this research project; these included the AST and the CSR. The CSR, which is first administered at the time of admission and, then subsequently administered every 90-135 days throughout the client's treatment episode, is the instrument that was used to measure improvement in a client's quality of life. As previously mentioned, this instrument collects valuable, self-reported, information regarding a client's perceived quality of life and the number of their self-reported good or bad days (SOA, 2011). The variable social support used in this study was measured with the CSR.

The information collected with the CSR is used in conjunction with the AST to inform the assessment, and treatment planning processes of a client's treatment episode,

as well as to measure improvement in their symptoms over time. The AST, which is also completed by the client at the time of admission into a treatment program, is divided into five sections: Depression, adverse experiences, fetal alcohol spectrum disorder and traumatic brain injury, other mental health, and substance use disorders (SOA, 2011). In this study the variables depression, adverse experiences, and substance abuse were measured with the AST.

Data Collection

This study's sample of participants is based on deidentified archival data from a nonprofit organization in Anchorage, Alaska. The data set that was used and analyzed for this study was collected from July 1, 2011 through June 30, 2013. In order to gain access to the archived data set, the dissertation committee chair, Dr. Susana Verdinelli, requested and received IRB approval. The chief clinical officer, chief executive officer of the nonprofit agency, and I signed a Data Use Agreement form. That form was submitted to Dr. Verdinelli on November 11th, 2013 and resubmitted on April 24th, 2017.

The nonprofit agency's senior program assistant worked with me in order to retrieve the data needed from AKAIMS for this project. The researcher met with the Senior Program Assistant on a weekly basis while the data was being retrieved to discuss the project and the goals of the research. This was to ensure that the data being pulled was adequate. During those meetings, the Senior Program Assistant discussed where the data could be found in the AKAIMS system, with the researcher, and if the requests from the researcher were realistic and achievable. The senior program assistant then utilized the AKAIMS Reports Manager in order to pull the information from the database. Those

reports were then sent to the researcher to be reviewed. Once the researcher was able to ensure that the data met the needs of the project, the information was sent on to the Chair for review and approval.

Overall, of the 278 cases in this study, there were 199 men (71.6%) and 79 women (28.4%). The ages of the participants of this study ranged from 22 years to 71 years old with a mean age of 35.91 years. The ethnicities of the participants were 129 Alaska Native or American Indian (46.4%) and 149 White (53.6%). Further, the sample consisted of 25 women and 104 men who identified as AI or AN, and an additional 54 women and 95 men who identified as white.

Of the participants, 277 (99.6%) identified as being from an urban community of origin and only one (.4%) identified as being from a rural community of origin; however, due to having only one participant, the variable was removed. The Type of Treatment Enrollment of the participants was reported as 256 were mandated to participant in a treatment program (92.1%) and only 22 reported voluntarily entering into the program (7.9%). In terms of completion rates, 192 (69.1%) of the participants successfully completed the treatment program and 86 (30.9%) unsuccessfully completed the program.

Table 1

Demographic Characteristics (N = 278)

	N	%
Gender		
Men	199	71.6%
Women	79	28.4%
Ethnicity		
Alaska Native	129	46.4%
White	149	53.6%
(*table continues*)		
Type of Treatment Enrollment		
Mandated	256	92.1%
Voluntary	22	7.9%
Discharge Type		
Successful	192	69.1%
Unsuccessful	86	30.9%
Age	*M* = 35.91, *SD* = 10.320, Range: 22 – 71	

Data Screening and Coding

The data set that was used and analyzed for this study was collected from July 1, 2011 through June 30, 2013. As previously mentioned in Chapter 3, a power analysis conducted with the G*Power 3.1.5 software indicated that 278 was a sufficient number of participants based on the study's characteristics and specific hypotheses (Faul et al., 2007). The parameters to calculate the number of participants (*n*) were set as the following: a medium effect size (f_x) of .15, an error probability (α) of .05, and a power of .95 indicated that a minimum of 176 participants were needed to test the hypotheses proposed. This study began with a total of 288 participants; however, due to incomplete data there were 10 cases excluded from this study. The sample size used in this study (*N*

= 278) was sufficient for the proposed hypotheses and statistical analysis; and it met the statistical assumption of adequate sample size.

Data coding for the dependent variable treatment discharge was addressed. The data set differentiated among different types of discharge. The full range of types of discharge included: Successfully completed treatment, Left on own against staff advice *with* satisfactory progress, Left on own against staff advice *without* satisfactory progress, Involuntary discharge due to non-participation, Involuntary discharge due to violation of the rules**,** Referred to another program or other service *with* satisfactory progress, Referred to another program or other service *without* satisfactory progress, Incarcerated due to offense committed while in treatment *with* satisfactory progress, Incarcerated due to offense committed while in treatment *without* satisfactory progress, Incarcerated due to old warrant or charge from before treatment *with* satisfactory progress, Incarcerated due to old warrant or charge from before treatment *without* satisfactory progress, Transferred to another facility for health reasons, Deceased, and Other.

Thus, this categorical variable was recoded into a dichotomous variable, successful treatment discharge and unsuccessful treatment discharge. The first two categories: Successfully completed treatment and Left on own against staff advice *with* satisfactory progress were coded as successful treatment discharge. The rest of the categories were coded as unsuccessful treatment discharge. Recoding a categorical variable into a dichotomous variable is widely used in logistic regression. This is because when variables that describe a characteristic use more than two categories, that information does not always end up being useable in their categorical form. When this

occurs, dummy coding is used as a way to incorporate nominal variables into a regression analysis. This way, a regression can have a high and low score, allowing for a comparison of two sides rather than each individual category to correlate with a rise or fall in a pattern (Pallant, 2013). The results revealed 69.1 % (N = 192) participants categorized as receiving successful treatment discharge and 30.9% (N = 86) categorized as receiving unsuccessful treatment discharge as noted in Table 1.

Missing Data

The original dataset consisted of 288 client cases; however, a number of those cases were missing important data. The decision was made to eliminate all cases that did not have an AST. Therefore, 10 client cases were eliminated from the original dataset; which resulted in 278 cases being analyzed for this study. There were no other missing items in the data set.

Assumptions

Some assumptions are made about the data when conducting a logistic regression. The assumptions of normality and linearity, and multicollinearity are discussed in this section (Pallant, 2013; Reed & Wu, 2013).

Normality and linearity. A normal probability plot (P-P plot) (See Appendix C) was utilized to check the assumptions of normality and linearity, with a goal of achieving points that are plotted in a reasonably straight, but diagonal, line from the bottom left to the top right of the chart. Additionally, a scatterplot (See Appendix D) was also used to further check on the assumptions of this analysis. With the scatterplot, the hope is that

there is a somewhat rectangular distribution of the residuals. The visual inspection of both the P-P plot and the Scatterplot revealed that the points on the P-P plot do largely form a diagonal line from the bottom left of the chart to the top right; however, the line is broken into two pieces near the middle of the chart. The scatterplot showed two relatively straight diagonal lines of plots that begin at the bottom left of the chart and follow a trend line to the top right corner. The plot is skinny and broken in the center with no plots in the middle of the graph. This is suggestive of a positive relationship (Pallant, 2013).

Multicollinearity. In a regression, correlations measure the degree to which the variables are related. These correlations can range from zero to one; however, higher values indicate a higher level of correlation. While higher values can indicate a higher level of correlation, it can be problematic if the values are too highly correlated. According to Pallant (2013), if the values are too high, it can become difficult to assess the effect of the independent variables on the dependent variable. For example, if two independent variables result in a correlation of .7 or more, it is most appropriate to remove one of them from the sample. A high correlation usually indicates that this assumption has been violated (Pallant, 2013). Table 2 reveals a medium positive correlation between adverse experiences and support, a medium negative correlation between depression and support, and a medium negative correlation between adverse experiences and depression.

Table 2

Multiple Correlations for Predictors of Treatment Completion

Variable	1	2	3	4	5	6	7	8	9
1. Age	-								
2. Race	.108*	-							
3. Gender	-.135*	-.186**	-						
4. Support	.016	-.034	-.228**	-					
5. Substance	.108*	.072	-.259**	.331**	-				
6. Depression	-.030	.056	.224**	-.510**	-.378**	-			
7. Adv Exp	.137*	-.021	-.420**	.504**	.385*	-.522**	-		
8. Treat Enroll	-.041	-.048	.037	-.112*	-.196**	.169**	-.129*	-	
9. Disch Type	-.025	-.001	-.249**	-.131*	-.129*	.201**	-.242**	.092	-

Note. * $p < .01$ (2-tailed), ** $p < .001$ (2-tailed).

Reliability of Key Variables

Reliability of Study Scales

I ran Cronbach's Alpha reliability coefficients to test the internal reliability of the scales in my dataset, which consisted of depression, adverse experiences, substance abuse, and social support. The results of the case processing summary for each analysis were checked to ensure that the number of cases included in the analysis was correct. Results yielded a Chronbach's alpha of .917 for the depression scale, a Chronbach's alpha of .843 for the adverse experiences scale, a Chronbach's alpha of .668 for the substance abuse scale, and a Cronbach's alpha of .810 for the social support scale. According to Pallant (2013), it is ideal when Cronbach's alpha coefficient is above .7; however, there are times when lower results can be expected. For example, when a scale has less than 10 items the analysis may result in a small number. Pallant (2013) suggests that in these cases the mean inter-item correlation value is reported. In my study, the adverse experiences scale only consisted of 8 items and yielded a Cronbach's alpha of .668; however, the mean inter-item correlation value for that scale is .402, with values

ranging from .227 to .537. This suggests that the items that compose the adverse experiences scale demonstrate a strong relationship.

Hypothesis: Predicting Successful Discharge

The research question, as well as the null and alternative hypotheses, that guided this study is provided below.

Research Question 1: Do adverse experiences, depression levels, social support, substance abuse, and sociocultural variables (ethnicity, age, gender, and mandatory/voluntary treatment enrollment) predict successful discharge in outpatient treatment for substance abuse?

$H_0$1: Adverse experiences, depression levels, social support, substance abuse, and sociocultural variables (ethnicity, age, gender, and mandatory/voluntary treatment enrollment) will statistically significantly predict successful treatment discharge.

$H_1$1: Adverse experiences, depression levels, social support, substance abuse, and sociocultural variables (ethnicity, age, gender, and mandatory/voluntary treatment enrollment) will not statistically significantly predict successful treatment discharge.

To test the hypothesis, a logistic regression analysis was conducted to examine the relationship between the dependent variable (the type of discharge from the treatment program) and the predictive variables (the participants' severity of substance abuse, depression, social support, and socio-cultural variables such as ethnicity, age, gender, and mandated/voluntary treatment enrollment).

Logistic Regression Analysis

Case processing summary. When the logistic regression was run, the first step into checking the results of the output was to review the case processing summary. This was to ensure that all cases were included in this data analysis (Pallant, 2013). As expected, all cases (N = 278) were included.

Dependent variable encoding. The table for dependent variable encoding explains how the dependent variables were coded when inputted into SPSS (Pallant, 2013). In this sample, the original values were Successful and Unsuccessful, which were coded as 0 or 1.

Categorical variables coding. This table is where the coding for the predictive variables is checked (Pallant, 2013). It is important under the frequency column that the variables are not too small. In my sample, the number of participants who were designated as voluntary under referral source was only 22, this is likely too small of a group to demonstrate significance.

Block 0 and classification. Block 0 is the section of the logistic regression output that presents the results of the analysis without factoring in any of the independent variables. According to Pallant (2013), this section of the output is later used as a comparison when the independent variables are included in the analysis. When examining the classification table, you can see that overall 69.1% of all cases in this sample were classified correctly.

Block 1 and omnibus tests of model coefficients. This section of the output is where the predictor variables are tested (Pallant, 2013). According to Pallant (2013), the omnibus tests of model coefficients allows us to determine how well the model worked

and is also known as *goodness of fit*. In my results, the sample shows a high value of significance (.000, $p < .0005$). The chi-square value is 28.66 with 8 degrees of freedom.

Hosmer and Lemeshow Test. According to Pallant (2013), this test is the most reliable test of model fit. An analysis that demonstrates a significance value of less than .05 is considered to be a poor fit; however, in my analysis, the chi-square value is 9.34 with a significance value of .314. Since this value is larger than .05, it is indicated that this model was, in fact, a good fit.

Model summary. The model summary further validated the fit of the model (Pallant, 2013). For this sample, the values of the cox and snell R square (.098) and the nagelkerke R square (.138) suggest that only 10 to 14% of the variability is explained by this set of variables.

Classification table. According to Pallant (2013), the classification table is used to demonstrate how effectively the model is able to predict the correct categories within the study. This classification table is able to be compared to the classification table in block 0 in order to observe the amount of improvement that occurred when the independent variables are included in the analysis (Pallant, 2013). According to the results of my analysis, the model correctly classified 67.3% of cases overall. This is a decrease from the table in block 0; which previously reported 69.1%.

Variables in the equation. This table provides information regarding the importance of each independent variable (Pallant, 2013). This is where the wald test data is outputted and the value of the statistic for each predictor is assigned. The sig. column also contains important data and you are looking, particularly, for significance values that

are less than .05. In my sample, the only variable that possessed a significance value less than .05 was gender (p = .003) (Table 3). Therefore, it can be derived that all other predictor variables did not contribute significantly to the model. The exp(B) column also contains interesting information regarding the odds ratio for each independent variable (Pallant, 2013). For example, in this sample, the exp(b) value is .304; which indicates that women are 30 per cent more likely to successfully complete their treatment program. Further, for each of the odds ratios there is a 95% C.I. for exp(B) which provides an upper and lower value. According to Pallant (2013), this is range of values in which we can be 95 per cent sure that the odds ratio is encompassed. In this study, gender appeared to be the most significant independent variable and according to the data analysis the lower C.I. for gender is .138 and the upper C.I. is .671; therefore, although I previously reported an exp(B) value of .304, I can be 95% certain that the actual value of the OR for gender lies between .138 and .671.

Table 3

Summary of Logistic Regression Analysis Predicting Treatment Outcomes

Measure	*B*	*SE*	*OR*	*95% CI*	*Wald statistic*	*p*
Age	.005	.014	1.005	[.978, 1.033]	.151	.698
Gender	-1.190	.404	.304	[.138, .671]	8.679	.003
Adverse Experiences	-.100	.069	.905	[.789, 1.036]	2.090	.148
Depression	.008	.007	1.008	[.996, 1.021]	1.678	.195
Severity of Substance Use	.001	.104	1.001	[.816, 1.228]	.000	.994
Support	.017	.044	1.018	[.934, 1.109]	.159	.690

Race	.126	.282	1.134	[.652, 1.971]	.198	.656
Treatment Enrollment	-.451	.495	.637	[.241, 1.681]	.830	.362

Note. CI = confidence interval for odds ratio (OR)

In sum, a logistic regression analysis was performed to assess the impact of several predictive factors on the likelihood that one would successfully complete their substance use treatment program. The model contained eight predictor variables (age, gender, adverse experiences, depression, severity of substance use, social support, race, and the type of treatment enrollment). A chi-square analysis was used to determine whether the eight variables considered together were significant predictors of treatment completion. Results of the analysis showed that the full model (containing all predictor variables) was statistically significant, χ^2 (8, N = 278) = 9.340, p < .05, indicating that the model was able to distinguish between participants who successfully completed the treatment program and those who did not. The fit of this model was further validated by the values of the cox & snell R square analysis, as well as the nagelkerke R square analysis. These analyses suggested that suggest that 10 to 14 percent of the variability is explained by this set of variables.

As shown in Table 3, only one of the eight predictor variables made a statistically significant contribution to the model. Gender was found to be a significant predictor of successful treatment completion; recording a regression coefficient of -.1.190. A full summary of these results can be found in Table 3.

Summary

Chapter 4 reported the results of this study's data collection and analyses in regard to the use of variables to predict successful treatment outcomes. The research question for this study is: Do adverse experiences, depression levels, social support, substance abuse, and socio-cultural variables (ethnicity, age, gender, and mandatory/voluntary treatment enrollment) predict successful discharge in outpatient treatment for substance abuse? According the data analysis, the alternative hypothesis has proven to be true. Adverse experiences, depression levels, social support, substance abuse, and socio-cultural variables (ethnicity, age, gender, and mandatory/voluntary treatment enrollment) will not statistically significantly predict successful treatment discharge. According to the results of the data analysis, the only variable that appeared to be significantly connected to treatment outcomes was gender. Women were more likely to successfully complete their treatment program versus their men counterparts.

Chapter 5 will include an interpretation of the results of this study. This next chapter will also discuss the limitations of this study, as well as its implications and the recommendations of how to apply the results to Alaska's field of behavioral health. Chapter 5 will conclude with a comprehensive overview of this research study, a description of this researcher's plans for the future use of this study's data and results, and possibilities for continued research on this topic.

Chapter 5: Discussion, Implications, and Recommendations

Introduction

The purpose of this study was to identify factors that contribute to, and predict, successful treatment discharge among AN clients who received treatment for substance abuse at an urban treatment center in Alaska. In this study, I evaluated whether adverse experiences, depression levels, social support, substance abuse, and sociocultural variables (such as ethnicity, age, gender, and mandated/voluntary treatment enrollment) could be used to predict successful discharge in outpatient treatment setting for substance abuse. The following research question guided this study: Do adverse experiences, depression levels, social support, substance abuse, and sociocultural variables (ethnicity, age, gender, and mandatory/voluntary treatment enrollment) predict successful discharge in outpatient treatment for substance abuse?

As previously discussed in Chapter 4, the alternative hypothesis was proven to be true. Adverse experiences, depression levels, social support, substance abuse, and sociocultural variables (ethnicity, age, and mandatory/voluntary treatment enrollment) did not predict successful treatment discharge. However, gender was found to be a significant predictor of successful treatment completion with women being more likely to successfully complete their treatment program versus their male counterparts.

Interpretation of the Findings

In this study, gender was found to be a significant predictor of successful treatment completion. Research supports the notion that there are many factors that can play a part in making a substance use treatment program more conducive to the specific

needs of its clientele. For example, the availability of child care, prenatal care, gender-specific programming, supplemental services, gender specific topics and treatment activities, access to mental health care, and access to comprehensive treatment programming that consists of wrap-around-services heavily, and positively, influences a women substance user's course of treatment (Ashley, Marsden, & Brady, 2003; Greenfield et al., 2007). When the above-mentioned provisions are in place, female clients are more likely to complete their treatment episodes successfully, demonstrate longer episodes of care, decrease their use of substances, reduce their mental health symptoms, experience improved birth outcomes, and achieve and maintain stable employment (Ashley et al., 2003; Greenfield et al., 2007).

Pelissier (2004) indicated that there are many differences between the factors that attract and retain men in substance use treatment programs, versus what attracts and retains women. Pelissier discusses the important role that sociodemographic factors play in predicting treatment outcomes, but also emphasizes the role that motivation plays in an individual's choice to seek out, and engage in, treatment for addictions. Programs that offer more options for individualized and specialized services are more likely to attract and retain women (Ashley et al., 2004; Greenfield et al., 2007; Pelissier, 2004). According to Pelissier, ethnicity has not been found to be a strong predictor of treatment completion; however, education has been discovered to be important. Both men and women who have higher levels of education are far less likely to engage in, or complete, substance use treatment programs. Additionally, the relationship that a woman has with her family is more influential as a predictive variable than it is for men (Pelissier, 2004).

Women who identify as having a strong connection to their families are more likely to seek out, and complete, treatment programs. Men, on the other hand, were found to be less likely to seek sobriety if they felt strongly connected to their families. Although a strong family connection was not found to be significant for men, having minor children present in the client's living arrangements was (Pelissier, 2004). Pelissier (2004) demonstrated that men and women who reported having young children living with them was a strong factor in the decision to engage in, and successfully complete, substance use treatment services. Other factors were also discovered to be significant, as well. For example, women who were older in age when their addiction developed were more likely than men to seek help; however, men were found to be much less successful in completing treatment if they have had prior treatment episodes (Pelissier, 2004). Lastly, women who experienced physical abuse before the age of 18 years of age or had been previously diagnosed with depression were also less likely than men who had similar circumstances to complete a substance use treatment program.

The findings of this study fall much into line with the aforementioned research. This study found that, of the predictive variables examined, gender was the only significant predictor of successful treatment completion at the non-profit organization in Anchorage, Alaska. This could likely be contributed to the particular composure of the organization's programs.

The organization places a heavy emphasis on women who are addicted, pregnant and parenting women who struggle with addictions, and their families. The emphasis on family is multifaceted. The organization fosters a sense of family throughout its culture

and strongly encourages, and at times requires, family participation in the process of healing from addiction. For example, the outpatient programs designed a family-focused program that they offer two days per week. On these days, clients are welcome to bring their children to the facility with them, as well as other family members that the client has deemed significant to their recovery process. Sometimes the family members are siblings, parents, or aunts and uncles; however, there are instances where the client has identified a close friend or a sponsor as a family member and chooses to include those individuals in their treatment process. On the family-focus days, the organization has staff that are available to facilitate activities with the children during the times that they are not directly involved in treatment activities with their parent. Although the treatment activities during the family-focus days are designed to have participation from both men and women clients, women clients participate far more often and more consistently than men.

In addition to the family-focus days, the non-profit organization offers gender-specific treatment programming and activities for all clients. For their female clientele, material such as recovering together program (ATTC, 2014), beyond violence (SAMHSA, 2015), adult-focused family behavior therapy (SAMHSA, 2015), alcohol behavioral couple therapy (SAMHSA, 2015), and a woman's path to recovery (SAMHSA, 2015) is offered. According to the treatment team, there is limited male-specific programming available; however, the organization does offer a nurturing father's program and offers the attendees of its other groups, such as relapse prevention and anger management, the option to participate in groups that are gender-specific versus co-ed.

The organization also has a team of mental health professionals on-site to work with individuals who experience co-occurring disorders. This team consists of master's level clinicians and bachelorette level case managers. When an individual is admitted to their substance use treatment program a referral to the mental health team is made if the AST indicates a positive screening for co-occurring disorders, depression, anxiety, a risk of self-harm or a risk to others, adverse experiences, fetal alcohol spectrum, traumatic brain injury or domestic violence. Once the referral is made to the mental health team, the individual is assessed and then provided the services that most efficiently and effectively meet their needs. These services may include individual psychotherapy, group psychotherapy, case management and peer support services, and possibly a referral to one of the organization's contracted psychiatrists.

Contrary to current literature, this study did not find adverse childhood experiences to be a predictor of treatment engagement and completion. According to Elliot et al. (2014), childhood neglect and maltreatment is often very influential in predicting the course of individuals' interactions with drugs and alcohol. In my study I was aiming to use adverse experiences as a means of predicting successful treatment completion. This variable, I suspect, may have been better utilized and more successful as a predictor of treatment engagement rather than completion.

There were also no significant findings made between depression and treatment completion. A significant amount of literature exists supporting that there is a positive association between depression and the engagement in substance use treatment programs, although that was not found in this study. Further, much of the evidence shows that

individuals who experience the diagnosis of a depressive disorder along with a substance use disorder are more likely to engage in, and successfully complete, treatment programs versus those who did not experience comorbidity (Greenfield, Venner, Kelly, Slaymaker, & Bryan, 2012; Hersh, Curry, & Kaminer, 2014). However, Mendoza et al. (2013) asserted the opposite through their research on substance users who participant in drug court programs, similar to the programs operated by the non-profit organization in Anchorage, Alaska. These authors found that substance users who also experienced a diagnosis of depression often failed to complete, and were generally less successful in, their treatment programs.

This variable may not have successfully predicted a client's treatment outcome due to the inadequacy of the screening tool used by the nonprofit organization. In other words, it is possible that the symptoms of depression are not being properly identified at the clients' time of admission. As it has been stated in previous sections of this study, the AST is a screening tool that is used to identify a variety of potential issues, one of which is depression. Additionally, the tool is completed only one time during a client's episode of care, so there is no avenue for a comparison of self-reported symptoms throughout the course of the client's treatment.

In a similar study, several demographic variables were examined to determine if predictive variables could be used to determine treatment outcomes with the AI/AN population. Spear, Crevecoeur-MacPhail, Denering, Dickerson, & Brecht (2013) studied a long list of demographic variables, including the type and severity of the participants' substance use, age, gender, and whether the participation in treatment was mandated or

voluntary, and their relation to treatment outcomes with the AI/AN population. Their study found that there were nearly no statistically significant variables that could predict treatment outcomes for AI/AN individuals in an outpatient setting. According to Spear et al. (2013), the only factor that was found to be significant in their research was recovery-oriented social support. This kind of social support was reported to be found through engaging in self-help groups and experiencing more sober, positive life events. Reaffirmed in literature by Chong and Lopez (2005), substance users who, at the time of their admission into a treatment program, perceived themselves as having sober social support were able to be successfully predicted to improve their psychosocial functioning and complete their treatment programs.

Once more, the screening tools that were used to collect the data that was utilized in my study were entirely based on the clients' self-report at the time of their admission into the non-profit treatment program. This often is a time when the client is detoxing from their substances of choice, experiencing high levels of stress, anxiety and overall life dissatisfaction, and not necessarily clear-minded. Due to the construct of the data collection process for my study, although the CSR is completed every 90-135 days, only the initial CSR was used. This made it impossible to compare any subsequent responses from the participants throughout the various phases of their treatment program, particularly once they have progressed past detoxification, are less anxious and stressed about their situation, and typically feeling more positive.

The severity of the participants substance use was also found to be insignificant at predicting treatment completion. According to Tiet, Ilgen, Byrnes, Harris, and Finney

(2007), the level of severity of an addicts use has not been found to be a significant predictor of treatment completion in outpatient settings. My study used data only from participants of the non-profit's outpatient programs. This could certainly explain why this variable did not prove to be significant. I would anticipate that if this study had focused on the organization's residential treatment programs, that the result may have been positive.

According to the available research, and reaffirmed in this study, it appears that there this sufficient evidence to demonstrate that ethnicity is not a stronger predictor of treatment engagement or completion for men or women (Pelissier, 2004). Additionally, Pelissier (2004), asserts that women who are older in age are more likely to engage in treatment services, whereas age is not a significant predictor for men. The mean age of the participants in this study is 35.91 years; however, Pelissier's study did not define the parameters of the age group that would be considered "older in age." Therefore, while gender, specifically women, resulted in being a predictive variable, this is not necessarily because of the women in this study being "older in age," that link was not discovered.

Lastly, the type of treatment in enrollment was not found to be a predictor of successful treatment completion. According to study data, this may have been due to the disproportionate percentage of participants who are mandated to enter into the treatment program versus the percentage of participants who voluntarily entered into the treatment program. Of the participants, 92.1% of them were mandated to engage in treatment, whereas only 7.9% entered into the program on a voluntary basis. Aside from the disproportionate percentages, the treatment program reports that it is common for their

clients, who are mandated to attend treatment, to decide that they would rather face the legal consequences of not completing their treatment program versus being engaged in a program for six to 12 months. The counseling staff report that they have had clients state that they would rather remand, return to prison, for 30 to 60 days instead of face their addiction.

Overall, the reason that I believe that gender was the only significant predictor of successful treatment completion was due to the nature of the organization's programmatic structure and their emphasis on family, their gender specific activities, and their comprehensive programming. Those are the factors that appear to set women up for success in treatment programs; however, those are not the same factors that assist men in achieving the same results. I also feel as though the wrong predictive variables were chosen. The research clearly demonstrates that ethnicity is not a predicting factor for men or women. Age is somewhat of a predictor for women, but not necessarily for men. The type of treatment enrollment could have the potential to be a predictor; however, the percentages would likely need to be in better balance.

Limitations of the Study

The results of my study clearly did not support the use of predictive factors, aside from gender, to determine whether a client will successfully complete their treatment programming. I believe that there were limitations to this study that may have had an impact on the anticipated outcomes. For example, there were limitations to using data from AKAIMS and also with using the AST and CSR. Primarily, while the SOA (2011) developed and adopted the AST and CSR, and made the use of these tools mandatory for

all of their grantees, they are not empirically validated measures. Further, the AST and the CSR are tools that are based solely on the participants' self-report. As I mentioned earlier, there is a significant stigmatization that could have the potential to cause clients who are engaging in substance use treatment services to be less than forthcoming when completing self-reported data collection tools (Coyhis & Simonelli, 2008; Duran et al., 2005).

Because archival data was used for this study, it was not possible to ensure that the data being reported by the participants was not influenced by an outside source, such as a family member, law enforcement, or by a referral source that was mandating their engagement and participation in a treatment program. The decision to utilize archival data also did not allow for considerations to be made for participants who may have a language barrier or cognitive challenges. Further, the archival data set was de-identified prior to being provided to me. While this guaranteed the anonymity of the participants, it did not allow for me to screen out clients who may have engaged in the outpatient treatment program more than once during the data collection period; therefore, it cannot be ensured that each participant is unique and unduplicated.

An additional limitation of this study is that the participants complete the AST and their CSR's on their own, in a paper-and-pencil format. The completed form is handed to their counselor, who inputs the participant's information into the AKAIMS system. The assumption is made that the raw data, which is directly reported by the client and collected by the treatment provider, is reported honestly, collected accurately, and that this raw data is also completely and correctly entered into the AKAIMS. Lastly, one

other limitation that should be mentioned is the way in which the dependent variable was measured. In this study, treatment success was measured based on clinicians' report of treatment progress. There were no specific validated measures used to assess clients' progress.

Recommendations for Future Research

Although the results of this particular study were not as significant as expected, I continue to emphasize the lack of meaningful research that addresses Alaska's significant problem with alcohol and other drugs, as well as the significant issues the AN population faces with the abuse of these substances. The prevalence of incidences of alcoholism, addiction, and substance use-related arrests involving the AN population are considerably high, with rates that are often many times more than the national average (Chong & Lopez, 2007; DeCou & Skewes, 2016; Doshi & Jiles, 2006; Rieckmann, Moore, Croy, Novins, & Aarons, 2016) The details of these incidences, such as economic status, level of education, English fluency, and drug of choice, vary between the numerous rural AN villages (DeCou & Skewes, 2016; Young & Joe, 2009). Nonetheless, decades of frequent substance-related interactions with the legal system indicate that substance misuse is a problem that deeply impacts AN adults and their families. The problematic consequences created by substance use, and the powerful impact it has on the AN population, are spread statewide throughout Alaska. While drug and alcohol treatment centers work to improve the services that they offer to both their Native and non-Native clients, it is imperative to identify how the AN culture perceive recovery and what methods of

treating substance use disorders are most effective when working with AN clients (Mohatt, et al., 2008; Rieckmann et al., 2016; Schacht & White, 2003).

My recommendation to future researchers of this topic is to seek out qualitative data on treatment process. Future researchers should visit treatment programs, work directly with the participants and the providers, conduct focus groups, and facilitate one-on-one interviews. Future researchers should be "at the table" and engaged in the conversation. I would also recommend that future research encompasses data from more than one treatment provider in Alaska. It would be interesting for future researchers to collect data from providers who offer services in a rural setting, as well as from providers who offer their services in Alaska's urban settings. This interest is largely due to the nuances between residing in remote, isolated areas versus habituating in an urban area. Often times, providers who are situated in rural locations do not have the ability to offer the same girth of services as a provider who is established in an urban setting (Hirchak & Murphy, 2016). Further, according to Oser, Biebel, Pullen, and Harp (2013), substance use counselors who work in rural geographical areas are reportedly more likely to experience burnout than those who work in an urban location. It is reasonable to suspect that burnout could have a direct impact on the quality of care a counselor is able to provide for their clients; which, is likely to impact the effectiveness of the program itself, as well as the successfulness of the clientele they are serving.

Another recommendation for future research is in regards to the tools that are being utilized to collect data from program participants. As mentioned in earlier sections of this study, the AST and CSR are not validated measures. Making use of an empirically

validated measure would allow for a more consistent and sound means of gathering important pieces of data that can be further studied and analyzed for clinical use.

Further, defining "treatment progress" could be beneficial to this area of research. Presently, there is a tremendous amount of pressure placed on providers in Alaska, who are recipients of state funding, to categorize their clients' discharges as "successful." It was conveyed that often times the SOA uses a provider's completion rates as a means of determining the amount of grant monies that provider will receive in the following fiscal year. In the AKAIMS system, there are 14 options that a clinician has to choose from when deciding how to categorize a client's discharge type. Of those 14 options, nearly half of them contain some sort of statement regarding satisfactory progress. For example, if a client decided to discharge themselves from the treatment program prematurely, the options that a clinician has to choose from are: *Left on own against staff advice with satisfactory progress* or *Left on own against staff advice without satisfactory progress*. There is much pressure applied by these programs' primary funder to select the option that categorizes the discharge as successful. As a State, or as a funding source, adopting a standard definition of *treatment progress* or *successful treatment completion* could level the playing field for the behavioral health providers in Alaska and open pathways for more consistent research findings.

Lastly, another area of recommendation would be for future research to target specific subgroups of substance abusers using validated measures in a more controlled environment, where data could be harvested by researchers, not clinicians. This would allow the specificities of such a broad area of concern to be better analyzed and addressed

through the data, likely achieving more accurate and in depth findings. A mixed methods approach to studying this topic may well result in research outcomes which could inform the treatment process, as well as improve treatment outcomes.

Implications for Social Change

As I mentioned in the previous section, Alaskans face substance use issues at a rate that is much higher than the national average (Chong & Lopez, 2007; Doshi & Jiles, 2006). The intention of this study was to seek out results that identified particular variables that could assist treatment providers in gaining useful insight into factors that could predict successful treatment completion for AN clients. Unfortunately, the data from the participant sample was analyzed and the variables that were identified as possible predictive factors did not prove to be correlated with a successful treatment episode outcome. According to the results of the data analysis, the only variable that appeared to be significantly connected to treatment outcomes was gender. Women were more likely to successfully complete their treatment program versus their male counterparts.

I believe the results of this study, in conjunction with further qualitative research on this topic, could be used to place more emphasis on why our male clients are not completing treatment programs as successfully as women. This study could be used to stimulate social change in regards to men who are seeking treatment services. It is possible that the treatment providers may need to be more sensitive to the needs of their male clients to increase the likelihood of a successful treatment completion. This could be developed through increased in-service trainings for counselors and treatment staff to

develop a higher level of competency regarding and a variety of topics, such as gender sensitivity, could be focused on. Treatment programs in Alaska tend to place more emphasis on pregnant and parenting women (PPW) and less emphasis on men and fathers. However, according to data from the National Survey on Drug Use and Health (SAMHSA, 2014), men are more likely to being drugs and alcohol users at an earlier age, they are more likely to abuse drugs more often and in larger amounts than women, and they are more likely to engage in binge drinking behavior.

Conclusion

This quantitative study was conducted for the purpose of identifying factors that contribute to successful treatment discharge among AN clients who received treatment for substance abuse at a treatment center in Alaska. Based on the theoretical framework of Marlatt's relapse prevention theory, using a cross-sectional, quantitative research design, predictive variables of the efficacy of substance use treatment among outpatient clients (N= 278) was examined. Data for this study were obtained through archival information from an Anchorage, Alaska-based non-profit organization. The goal was to develop an understanding of what factors contribute to successful treatment completion; allowing treatment providers to gain useful information that could to be applied in programs to set their clients up for successful attempts at maintaining sobriety.

Unfortunately, according to the results of the data analysis, the only variable that appeared to being significantly connected to treatment outcomes was gender, specifically women. There was no significance discovered with any of the other variables; thus the alternative hypothesis was proven to be true. Adverse experiences, depression levels,

social support, substance abuse, and socio-cultural variables (ethnicity, age, and mandatory/voluntary treatment enrollment) did not prove to statistically significantly predict successful treatment discharge. I am hopeful that, although the results of this study were not statistically significant, future research will prompt social change in the area of improving outcome measures for male AN treatment participants.

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Appendix A

ALASKA SCREENING TOOL

Client Name: _____ **Client Number:** _____

Staff Name: _____ **Date:** _____

Info received from: (include relationship to client) _____

Please answer these questions to make sure your needs are identified. Your answers are important to help us serve you better. If you are filling this out for someone else, please answer **from their view**. Parents or guardians usually complete the survey on behalf of children under age 13.

SECTION I – Please estimate the number of days in the **last 2 weeks** (enter a number from 0-14 days):	**0-14 days**
1. Over the last two weeks, how many days have you felt little interest or pleasure in doing things?	_____
2. How many days have you felt down, depressed or hopeless?	_____
3. Had trouble falling asleep or staying asleep or sleeping too much?	_____
4. Felt tired or had little energy?	_____
5. Had a poor appetite or ate too much?	_____
6. Felt bad about yourself or that you were a failure or had let yourself or your family down?	_____
7. Had trouble concentrating on things, such as reading the newspaper or watching TV?	_____
8. Moved or spoken so slowly that other people could have noticed?	_____
9. Been so fidgety or restless that you were moving around a lot more than usual?	_____
10. Remembered things that were extremely unpleasant?	_____
11. Were barely able to control your anger?	_____
12. Felt numb, detached, or disconnected?	_____
13. Felt distant or cut off from other people?	_____

SECTION II – Please check the answer to the following questions based on your lifetime.		
14. I have lived where I often or very often felt like I didn't have enough to eat, had to wear dirty clothes, or was not safe	☐ Yes	☐ No
15. I have lived with someone who was a problem drinker or alcoholic, or who used street drugs	☐ Yes	☐ No
16. I have lived with someone who was seriously depressed or seriously mentally ill	☐ Yes	☐ No
17. I have lived with someone who attempted suicide or completed suicide	☐ Yes	☐ No
18. I have lived with someone who was sent to prison	☐ Yes	☐ No
19. I, or a close family member, was placed in foster care	☐ Yes	☐ No
20. I have lived with someone while they were physically mistreated or seriously threatened	☐ Yes	☐ No
21. I have been physically mistreated or seriously threatened	☐ Yes	☐ No
a. If you answered **"Yes"**, did this involve your intimate partner (spouse, girlfriend, or boyfriend)?	☐ Yes	☐ No

ALASKA SCREENING TOOL

SECTION III – Please answer the following questions based **on your lifetime.** (D/N = Don't Know)

22. I have had a blow to the head that was severe enough to make me lose consciousness ☐ Yes ☐ No ☐ D/N
23. I have had a blow to the head that was severe enough to cause a concussion ☐ Yes ☐ No ☐ D/N

If you answered "Yes" to 21 or 22, please answer a-c:

a. Did you receive treatment for the head injury? ☐ Yes ☐ No
b. After the head injury, was there a permanent change in anything? ☐ Yes ☐ No ☐ D/N
c. Did you receive treatment for anything that changed? ☐ Yes ☐ No

24. Did your mother ever consume alcohol? ☐ Yes ☐ No ☐ D/N
    a. **If Yes,** did she continue to drink during her pregnancy with you? ☐ Yes ☐ No ☐ D/N

SECTION IV – Please answer the following questions based on the **past 12 months.**

25. Have you had a major life change like death of a loved one, moving, or loss of a job? ☐ Yes ☐ No
26. Do you sometimes feel afraid, panicky, nervous or scared? ☐ Yes ☐ No
27. Do you often find yourself in situations where your heart pounds and you feel anxious and want to get away? ☐ Yes ☐ No
28. Have you tried to hurt yourself or commit suicide? ☐ Yes ☐ No
29. Have you destroyed property or set a fire that caused damage? ☐ Yes ☐ No
30. Have you physically harmed or threatened to harm an animal or person on purpose? ☐ Yes ☐ No
31. Do you ever hear voices or see things that other people tell you they don't see or hear? ☐ Yes ☐ No
32. Do you think people are out to get you and you have to watch your step? ☐ Yes ☐ No

SECTION V – Please answer the following questions based on the **past 12 months.**

33. Have you gotten into trouble at home, at school, or in the community, because of using alcohol, drugs, or inhalants? ☐ Yes ☐ No
34. Have you missed school or work because of using alcohol, drugs, or inhalants? ☐ Yes ☐ No
35. In the past year have you ever had 6 or more drinks at any one time? ☐ Yes ☐ No
36. Does it make you angry if someone tells you that you drink or use drugs, or inhalants too much? ☐ Yes ☐ No
37. Do you think you might have a problem with your drinking, drug or inhalant use? ☐ Yes ☐ No

THANK YOU for providing this information! Your answers are important to help us serve you better.

Appendix B

CLIENT STATUS REVIEW

Case Number: _____

Date completed: _____/_____/_____ Name _____

If you are filling this out for someone else, please answer from their view.

	# of Days
1. How many days during the past 30 days was your physical health (including physical illness and/or injury) **not** good?	_____
2. How many days during the past 30 days was your mental health (including depression and/or problems with emotions, behavior, or thinking) **not** good?	_____
3. How many days during the past 30 days did poor physical or mental health keep you from doing your usual activities, such as taking care of yourself, work, or recreation?	_____
4. How many days during the past 30 days have you had thoughts about suicide or hurting yourself?	_____
5. How many days during the past 30 days have you used alcohol?	_____
6. How many days during the past 30 days have you used illegal drugs (including medications not as prescribed/directed)?	_____
7. In the past 30 days, how many times have you used emergency medical services such as the hospital, emergency room, emergency medical technicians or health aides for physical, substance abuse, or mental health problems?	_____

8. Which one of the following best describes your housing situation? (please check one)

- ☐ Adult in private residence – independent living (house, apartment, trailer, hotel, room, etc.)
- ☐ Adult in private residence – dependent living (house, apartment, trailer, hotel, room, etc.)
- ☐ Child living with family/extended family or with non-relative
- ☐ Foster home/foster care
- ☐ Homeless or shelter
- ☐ Jail or correctional facility
- ☐ Crisis residence (short term stabilization)
- ☐ Residential care facility (assisted living, halfway house, group homes, board & care)
- ☐ Residential treatment facility for:
  - ☐ Mental health ☐ Substance abuse ☐ Co-occurring disorder
- ☐ Institutional care facility – 24 hour, 7 days/week (nursing facilities/homes, psychiatric health facilities, hospitals)
- ☐ Other (please describe) _____

9. If you are a student (attending elementary through high school), which one of the following best describes your school?

☐ Public/private school ☐ Home schooled

If you attend a public/private school, how many days have you been absent during the past 30 school days? _____

10. Which one of the following best describes your employment status? (please check one)

- ☐ Employed full time working for money (30 or more hours per week including supported employment)
- ☐ Employed part time working for money (less than 30 hours per week including supported employment)
- ☐ Unemployed (looking for employment during the past 30 days or on layoff from a job)
- ☐ Not in labor/work force (not looking for employment during the past 30 days); if you checked this box, please check one of the following:
  - ☐ Homemaker ☐ Student ☐ Job training program
  - ☐ Retired ☐ Disabled ☐ Volunteer
  - ☐ Engaged in subsistence activities ☐ Inpatient/inmate (otherwise unable to enter labor force)
  - ☐ Other (please describe) _____

11. In a typical **week** over the past 30 days, how many hours were you engaged in productive activities (e.g., school, employment, volunteering in community service, subsistence activities, etc.)? Total hours: _____

12. In the past 30 days, have you had any legal involvement? (Legal charges, court appearance, arrests, probation, parole) ☐ Yes ☐ No

CLIENT STATUS REVIEW

Case Number: _____

13. In the past 30 days, have you been arrested? ☐ Yes ☐ No
14. In the past 30 days, have you had an intimate partner slap, punch, shove, kick, choke, hurt, or threaten you? ☐ Yes ☐ No
15. In the past 12 months, have you been arrested? ☐ Yes ☐ No

16. Below are questions about your life. Please answer each question by putting an **X** in the space that best describes how you feel about each issue. Please use only **one X** for each question.

How do you feel about:	Terrible ☹	Unhappy ☹	Dissatisfied 😕	Mixed 😐	Satisfied 🙂	Pleased 🙂	Delighted ☺
Your housing?							
Your ability to support your basic needs of food, housing, etc.?							
Your safety in your home or where you sleep?							
Your safety outside your home?							
How much people in your life support you?							
Your friendships?							
Your family situation?							
Your sense of spirituality, relationship with a higher power, or meaningfulness of life?							
Your life in general?							

17. Who filled out this survey? (please check one)
    - ☐ I filled this out by myself
    - ☐ I filled this out for a child
    - ☐ Someone helped me fill this out (Person's name) _____

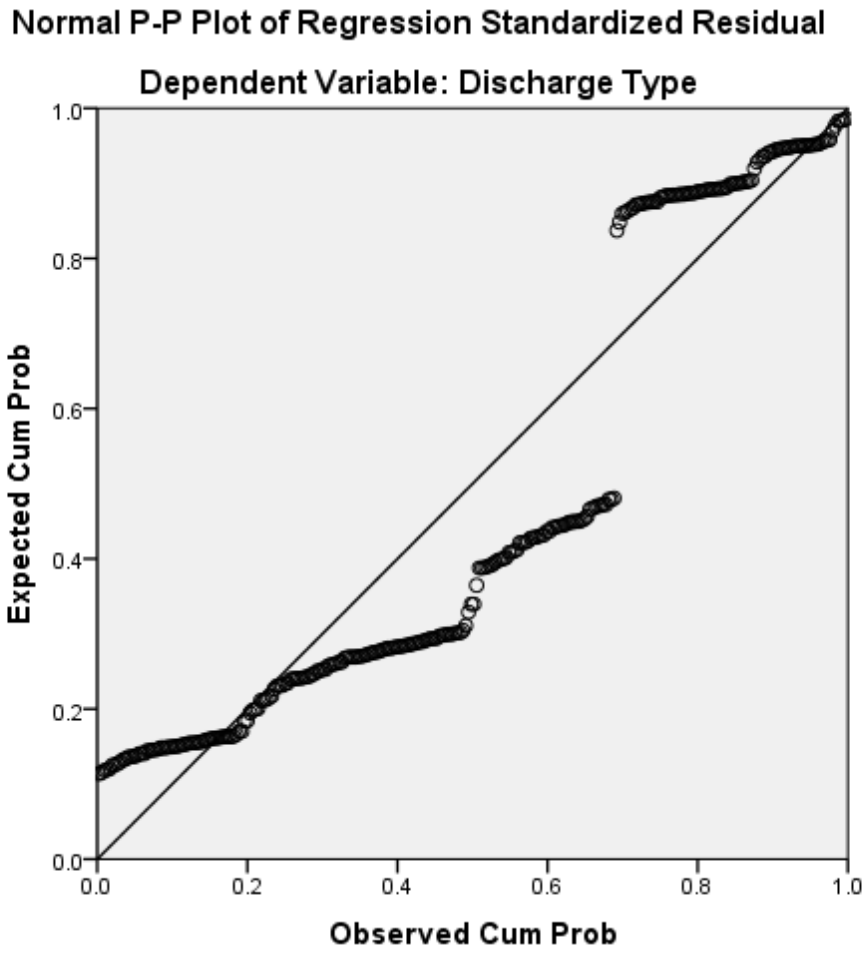
18. Please respond to these statements if you have received services from this agency.

How do you feel about the services you received? (Place an **X** in the space that best describes your level of agreement with each statement)	Terrible ☹	Unhappy ☹	Dissatisfied 😕	Mixed 😐	Satisfied 🙂	Pleased 🙂	Delighted ☺
I was treated with respect.							
I was able to get all the services I needed.							
The services improved the quality of my life.							

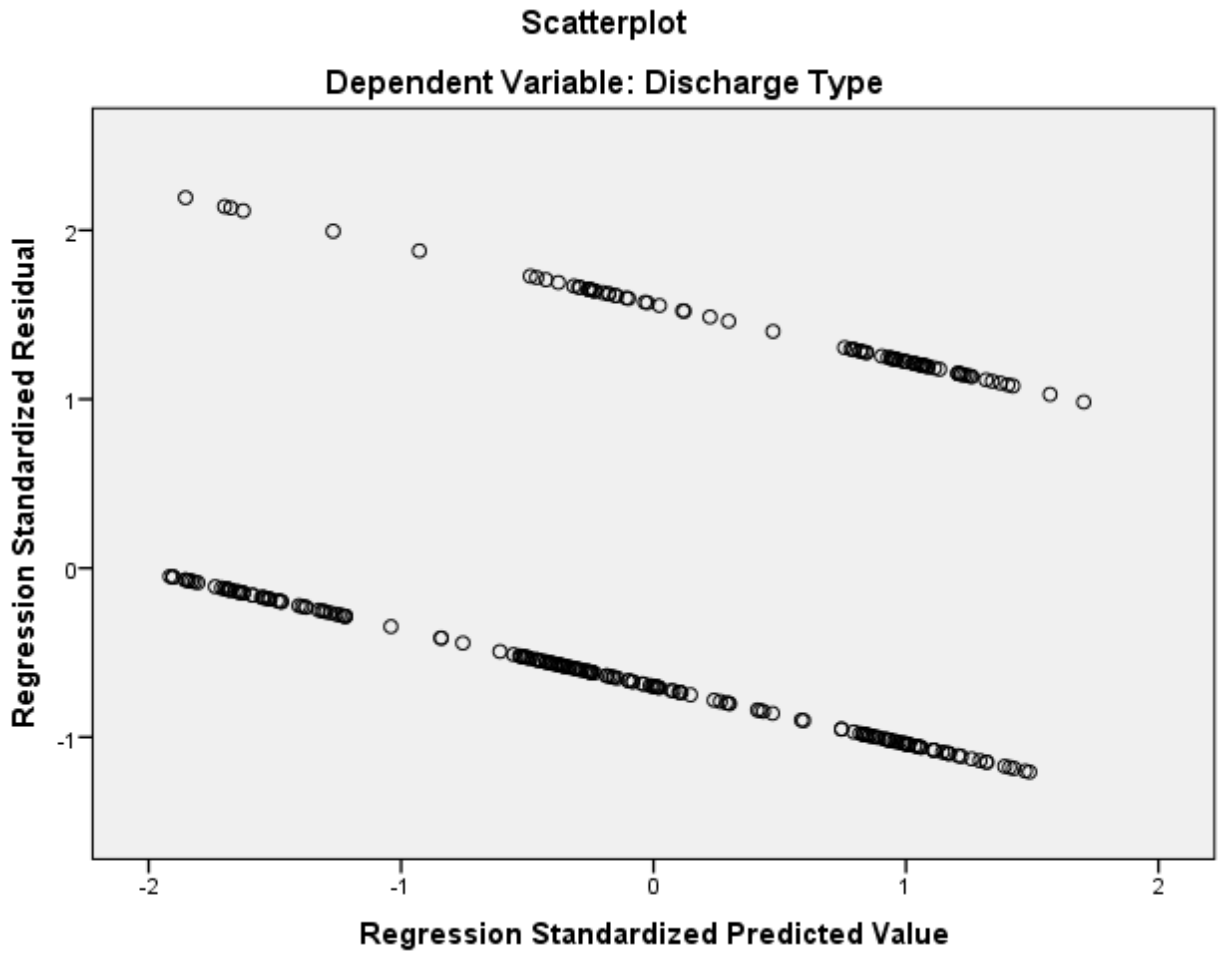
19. What did you like about the services you received? _____

20. What did you dislike about the services you received? _____

Appendix C


Normal P-P Plot of Regression Standardized Residual
Dependent Variable: Discharge Type
Expected Cum Prob
Observed Cum Prob
0.0
0.2
0.4
0.6
0.8
1.0

Appendix D


Scatterplot
Dependent Variable: Discharge Type
Regression Standardized Residual
Regression Standardized Predicted Value
2
1
0
-1
-2
-1
0
1
2

Appendix E: IRB Approval Letter

IRB <irb@mail.waldenu.edu>

Fri 5/5/2017, 12:41 PM
Courtney Kitiona <courtney.kitiona@waldenu.edu>;

Dear Ms. Kitiona,

This email is to notify you that the Institutional Review Board (IRB) confirms that your study entitled, "Factors Contributing to Substance Abuse Treatment Completion Among Alaska Natives" meets Walden University's ethical standards. Our records indicate that you will be analyzing data provided to you by Akeela Inc. as collected under its oversight. Since this study will serve as a Walden doctoral capstone, the Walden IRB will oversee your capstone data analysis and results reporting. The IRB approval number for this study is 05-05-17-0078805.

This confirmation is contingent upon your adherence to the exact procedures described in the final version of the documents that have been submitted to IRB@mail.waldenu.edu as of this date. This includes maintaining your current status with the university and the oversight relationship is only valid while you are an actively enrolled student at Walden University. If you need to take a leave of absence or are otherwise unable to remain actively enrolled, this is suspended.

If you need to make any changes to your research staff or procedures, you must obtain IRB approval by submitting the IRB Request for Change in Procedures Form. You will receive confirmation with a status update of the request within 1 week of submitting the change request form and are not permitted to implement changes prior to receiving approval. Please note that Walden University does not accept responsibility or liability for research activities conducted without the IRB's approval, and the University will not accept or grant credit for student work that fails to comply with the policies and procedures related to ethical standards in research.

When you submitted your IRB materials, you made a commitment to communicate both discrete adverse events and general problems to the IRB within 1 week of their occurrence/realization. Failure to do so may result in invalidation of data, loss of academic credit, and/or loss of legal protections otherwise available to the researcher.

Both the Adverse Event Reporting form and Request for Change in Procedures form can be obtained at theIRB section of the Walden website: http://academicguides.waldenu.edu/researchcenter/orec

Researchers are expected to keep detailed records of their research activities (i.e., participant log sheets, completed consent forms, etc.) for the same period of time they retain the original data. If, in the future, you require copies of the originally submitted IRB materials, you may request them from Institutional Review Board.

Both students and faculty are invited to provide feedback on this IRB experience at the link below:

http://www.surveymonkey.com/s.aspx?sm=qHBJzkJMUx43pZegKlmdiQ_3d_3d

Congratulations!
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Information about the Walden University Institutional Review Board, including instructions for application, may be found at this link: http://academicguides.waldenu.edu/researchcenter/orec